

HP StorageWorks

Enterprise File Services

WAN Accelerator Manager 1.2

user's guide



392360-001

Part number: 392360-001
First edition: May 2005



Legal and notice information

© Copyright 2005 Hewlett-Packard Development Company, L.P.

© Copyright 2003–2005 Riverbed Technology, Inc.

Hewlett-Packard Company makes no warranty of any kind with regard to this material, including, but not limited to, the implied warranties of merchantability and fitness for a particular purpose. Hewlett-Packard shall not be liable for errors contained herein or for incidental or consequential damages in connection with the furnishing, performance, or use of this material.

This document contains proprietary information, which is protected by copyright. No part of this document may be photocopied, reproduced, or translated into another language without the prior written consent of Hewlett-Packard. The information is provided “as is” without warranty of any kind and is subject to change without notice. The only warranties for HP products and services are set forth in the express warranty statements accompanying such products and services. Nothing herein should be construed as constituting an additional warranty. HP shall not be liable for technical or editorial errors or omissions contained herein.

Linux is a trademark of Linus Torvalds in the United States and in other countries.

Microsoft, Windows, Windows NT, Windows 2000, Outlook, and Windows Internet Explorer are trademarks or registered trademarks of Microsoft Corporation in the United States and in other countries.

UNIX is a registered trademark in the United States and in other countries, exclusively licensed through X/Open Company, Ltd.

Parts of this product are derived from the following software:

Apache © 2000-2003 The Apache Software Foundation. All rights reserved.

bsdstr.c, © 1998 Todd C. Miller (Todd.Miller@courtesan.com). All rights reserved.

Busybox, © Eric Andersen

Less © 1984-2002 Mark Nudelman

Libevent, © 2000-2002 Niels Provos. All rights reserved.

LibGD, Version 2.0 licensed by Boutell.Com, Inc.

Libtecla, © 2000, 2001 by Martin C. Shepherd. All rights reserved.

Linux Kernel, © Linus Torvalds

md5, md5.cc, © 1995 University of Southern California. All rights reserved. © 1991-2, RSA Data Security, Inc. All rights reserved.

my_getopt.{c,h}, © 1997, 2000, 2001, 2002, Benjamin Sittler. All rights reserved.

NET-SNMP: © 1989, 1991, 1992 by Carnegie Mellon University. All rights reserved.

OpenSSH, © 2002 Nils Nordman. All rights reserved.

ptmalloc © 2001 Wolfram Gloger

sSMTP, © Mark Ryan, Hugo Haas, Christoph Lameter, and Dave Collier-Brown

Vixie-Cron, © 1988, 1990, 1993, 1994 by Paul Vixie. All rights reserved.

Zile, © 1997-2001 Sandro Sigalam © 2003 Reuben Thomas. All rights reserved.

For detailed copyright and license agreements, see the *HP StorageWorks Enterprise File Services WAN Accelerator Installation and Configuration Guide*. For modified source code (where required), see the HP technical support site at <http://www.hp.com>.

Certain libraries were used in the development of this software, licensed under GNU Lesser General Public License, Version 2.1, February 1999. For the copyright and license agreement, see the *HP StorageWorks Enterprise File Services WAN Accelerator Installation and Configuration Guide*. For a list of libraries and source material (where required), see the HP technical support site at

<http://www.hp.com>.

Contents

Introduction	9
About This Guide.....	9
Types of Users	9
Organization of This Guide	9
Document Conventions.....	10
Hardware and Software Dependencies.....	11
Additional Resources	11
Related HP Documentation	11
Online Documentation	11
Related Reading.....	12
Contacting HP	12
Technical Support.....	12
HP Storage Web Site.....	13
HP NAS Services Web Site	13
 Chapter 1 Overview of the HP EFS WAN Accelerator	 15
Overview of the HP EFS WAN Accelerator.....	15
HP EFS WAN Accelerator Registration.....	16
HP EFS WAN Accelerator Groups.....	16
EFS WAN Accelerator Manager Polling Interval.....	17
Configuration Backups.....	17
EFS WAN Accelerator Manager Command-Line Interface.....	18
Batch Configurations For HP EFS WAN Accelerator Groups.....	19
 Chapter 2 Installing and Configuring the HP EFS WAN Accelerator Manager	 21
Checking Your Inventory	21

Preparing Your Site for Installation	22
Required Tools and Equipment.....	22
Required Configuration Information.....	22
Mounting the EFS WAN Accelerator Manager to a Rack.....	23
HP EFS WAN Accelerator Manager Hardware	23
NIC Port LabelingTerminology Note	25
Powering On the EFS WAN Accelerator Manager	25
Connecting to the EFS WAN Accelerator Manager.....	26
Configuring the EFS WAN Accelerator Manager	26
Connecting the EFS WAN Accelerator Manager to Your Network	29
Verifying Your Connections	29
Connecting to the HP EFS WAN Accelerator Manager	29
Connecting to the HP EFS WAN Accelerator Manager.....	30
The HP EFS WAN Accelerator Manager Home: Welcome Page	32
Navigating in the HP EFS WAN Accelerator Manager	33
Navigating in the HP EFS WAN Accelerator Manager.....	33
Chapter 3 Using the HP EFS WAN Accelerator Manager	37
Setting HP EFS WAN Accelerator Manager Network Parameters	38
Setting the HP EFS WAN Accelerator Manager Host Name and Primary Interface	38
Setting the HP EFS WAN Accelerator Manager Domain Name Service.....	40
Setting HP EFS WAN Accelerator Manager Hosts	42
Setting HP EFS WAN Accelerator Manager Static Network Routes.....	43
Setting HP EFS WAN Accelerator Manager Alarms and Fault Reporting	45
Setting HP EFS WAN Accelerator Manager Alarm Thresholds	45
Setting HP EFS WAN Accelerator Manager Fault Notification	46
Setting HP EFS WAN Accelerator Manager SNMP Traps.....	48
Setting HP EFS WAN Accelerator Manager Logging Options.....	50
Setting HP EFS WAN Accelerator Manager Local Logging	50
Setting HP EFS WAN Accelerator Manager Remote Logging Servers	52

Setting the HP EFS WAN Accelerator Manager	
Date and Time	53
Setting the HP EFS WAN Accelerator Manager	
Date and Time	53
Setting HP EFS WAN Accelerator Manager	
NTP Servers	55
Managing Accounts on the HP EFS WAN	
Accelerator Manager	56
Setting HP EFS WAN Accelerator Manager	
Authentication Methods	57
Setting the HP EFS WAN Accelerator Manager	
Administrative Password	58
Setting the HP EFS WAN Accelerator Manager	
Monitor Password	59
Setting Up an HP EFS WAN Accelerator Manager	
RADIUS Server	60
Setting Up an HP EFS WAN Accelerator Manager	
TACACS+ Server	62
Registering HP EFS WAN Accelerators	64
Registering HP EFS WAN Accelerators	64
Creating HP EFS WAN Accelerator Groups	68
Creating HP EFS WAN Accelerator Groups	68
Setting the HP EFS WAN Accelerator Manager	
Polling Interval	71
Setting the Polling Interval	71
Modifying the HP EFS WAN Accelerator Manager	
Home Page	72
Setting HP EFS WAN Accelerator Manager	
Home Page Attributes	73
Managing HP EFS WAN Accelerator Manager	
Configurations	73
Writing HP EFS WAN Accelerator Manager	
Configurations to Memory	74
Upgrading Your HP EFS WAN Accelerator	
Manager Software	76
Upgrading Your HP EFS WAN Accelerator	
Manager Software	76
Updating Your HP EFS WAN Accelerator Manager	
Licenses	78
Updating Your HP EFS WAN Accelerator	
Manager Licenses	78
Rebooting the HP EFS WAN Accelerator Manager	80
Rebooting the HP EFS WAN Accelerator Manager	80
Shutting Down the HP EFS WAN Accelerator	
Manager	80
Configuring Service Settings for Appliance Groups	81
Enabling Service Parameters for Appliance Groups	82
Setting In-Path Rules for Appliance Groups	91

Setting Alarms and Fault Reporting for	
Appliance Groups	97
Setting Alarm Thresholds for Appliance Groups.....	98
Setting Fault Notification for Appliance Groups.....	99
Setting SNMP Traps for Appliance Groups	101
Setting Logging Options	
for Appliance Groups	103
Setting Local Logging for Appliance Groups.....	103
Setting Remote Logging for Appliance Groups.....	105
Upgrading Software for Appliance Groups.....	106
Upgrading Software for Appliance Groups	106
Starting, Stopping, and Restarting	
the HP EFS WAN Accelerator Service on	
Appliance Groups	108
Starting, Stopping, and Restarting	
the HP EFS WAN Accelerator Service on	
Appliance Groups.....	108
Rebooting Appliance Groups.....	109
Rebooting Appliance Groups	109
Sending HP EFS WAN Accelerator CLI	
Commands to Appliance Groups	110
Sending HP EFS WAN Accelerator CLI	
Commands to Appliance Groups.....	110
Viewing Appliance Group Reports.....	111
Viewing Appliance Group Status Reports.....	112
Viewing HP StorageWorks Enterprise File Services	
WAN Accelerator Manager Logs.....	113
Viewing HP EFS WAN Accelerator Manager Logs	113
Getting Help	114
Contacting Technical Support	114
Viewing CLI Commands.....	114
Viewing Online Help Contents	115

Appendix A Command-Line Interface for HP EFS WAN Accelerator	
Manager	117
Using the Command-Line Interface.....	117
Overview of the HP EFS WAN Accelerator	
Manager CLI.....	118
Entering Commands	119
Angle Bracketed Parameters.....	119
Accessing Online Help.....	119
Error Messages.....	120
Command Negation.....	120
Saving Configuration Changes.....	120
Network Interface Commands.....	120
Name Resolution Commands	123

Routing Commands.....	125
ARP Commands.....	126
Event Logging Configuration and Viewing Commands	127
User Accounts Commands	130
Secure Shell Server Commands	134
NTP, Clock, and Time Zone Commands.....	135
Event Notification Commands	138
Diagnostic Commands	141
Statistics Commands	145
Configuration File Management Commands	148
License Key Commands.....	155
Image Management Commands.....	156
CLI Option Commands.....	159
Enable Configuration Mode and Persistence Commands.....	161
SNMP Commands	162
Web Commands.....	165
TCP Dump Capture Commands	168
Appendix B HP System Ports	169
Default Ports	169
Commonly Optimized Ports	169
Interactive Ports Automatically Forwarded by the HP System.....	170
Secure Ports Automatically Forwarded by the HP System.....	170
Appendix C Technical Specifications and Regulatory Information	173
HP EFS WAN Accelerator Manager Technical Specifications.....	173
Environmental Specifications.....	174
Glossary	175
Index	179

Introduction

In This Introduction

Welcome to the *HP StorageWorks Enterprise File Services WAN Accelerator Manager User's Guide*. Read this introduction for an overview of the information provided in this guide and for an understanding of the documentation conventions used throughout. This introduction contains the following sections:

- ◆ [“About This Guide,”](#) next
- ◆ [“Hardware and Software Dependencies”](#) on page 11
- ◆ [“Additional Resources”](#) on page 11
- ◆ [“Contacting HP”](#) on page 12

About This Guide

This guide describes how to manage and monitor groups of HP EFS WAN Accelerators (the HP system) using the HP StorageWorks Enterprise File Services (EFS) WAN Accelerator Manager.

Types of Users

This guide is written for storage and network administrators with familiarity administering and managing networks using Common Internet File System (CIFS), HyperText Transport Protocol (HTTP), File Transfer Protocol (FTP), and Microsoft Exchange.

Organization of This Guide

The *HP StorageWorks Enterprise File Services WAN Accelerator Manager User's Guide* includes the following chapters:

- ◆ [Chapter 1, “Overview of the HP EFS WAN Accelerator,”](#) provides an overview of the EFS WAN Accelerator Manager and its features.
- ◆ [Chapter 2, “Installing and Configuring the HP EFS WAN Accelerator Manager,”](#) describes how to install, configure, and connect to the EFS WAN Accelerator Manager.
- ◆ [Chapter 3, “Using the HP EFS WAN Accelerator Manager,”](#) describes how to use the EFS WAN Accelerator Manager to configure and manage your network using the EFS WAN Accelerator Manager.

- ◆ [Appendix A, “Command-Line Interface for HP EFS WAN Accelerator Manager,”](#) provides a reference manual for the EFS WAN Accelerator Manager command-line interface (CLI). It lists commands, syntax, parameters, and example usage.
- ◆ [Appendix B, “HP System Ports,”](#) provides a list of the default ports, and interactive, and secure ports that are automatically forwarded by the HP EFS WAN Accelerator.
- ◆ [Appendix C, “Technical Specifications and Regulatory Information,”](#) provides technical and environmental specifications and regulatory information for the EFS WAN Accelerator Manager.

A glossary of terms follows the chapters, and a comprehensive index directs you to areas of particular interest.

Document Conventions

This manual uses the following standard set of typographical conventions to introduce new terms, illustrate screen displays, describe command syntax, and so forth.

Convention	Meaning
<i>italics</i>	Within text, new terms and emphasized words appear in italics.
boldface	Within text, commands, keywords, identifiers (names of classes, objects, constants, events, functions, program variables), environment variables, filenames, Graphical User Interface (GUI) controls, and other similar terms appear in boldface.
Courier	Information displayed on your terminal screen and information that you are instructed to enter appear in a Courier font.
KEYSTROKE	Keys that you are to press appear in uppercase letters in Helvetica font.
< >	Within syntax descriptions, values that you specify appear in angle brackets. For example: interface <ipaddress>
[]	Within syntax descriptions, optional keywords or variables appear in brackets. For example: ntp peer <addr> [version <number>]
{ }	Within syntax descriptions, required keywords or variables appear in braces. For example: {delete <filename> upload <filename>}
	Within syntax descriptions, the pipe symbol represents a choice to select one keyword or variable to the left or right of the symbol. (The keyword or variable can be either optional or required.) For example: {delete <filename> upload <filename>}

Hardware and Software Dependencies

The following table summarizes the hardware, software, and operating system requirements for the EFS WAN Accelerator Manager.

HP System Component	Hardware Requirements	Software Requirements Operating System Requirements
EFS WAN Accelerator Manager	<ul style="list-style-type: none"> Any computer that supports a Web browser with color image display. 	<ul style="list-style-type: none"> The EFS WAN Accelerator Manager has been tested with Mozilla, version, 1.2.1 and Microsoft Internet Explorer version 6.0x. <p>NOTE: Javascript and cookies must be enabled in your browser.</p> <p>NOTE: If you want to encrypt your communication, you must have a Secure Sockets Layer (SSL) capable browser.</p>

Additional Resources

This section describes the following resources that supplement the information in this guide:

- ◆ Release notes
- ◆ Related HP documentation
- ◆ Related technical reference books

Related HP Documentation

You can access the complete document set for the HP system from the *HP StorageWorks EFS WAN Accelerator Documentation Set CD-ROM*:

- ◆ *HP StorageWorks Enterprise File Services WAN Accelerator Installation and Configuration Guide* describes how to install and configure the HP EFS WAN Accelerator.
- ◆ *HP StorageWorks Enterprise File Services WAN Accelerator Management Console User's Guide* describes how to use the Management Console to configure and manage the HP EFS WAN Accelerator.
- ◆ *HP StorageWorks Enterprise File Services WAN Accelerator Command-Line Interface Reference Manual* is a reference manual for the HP EFS WAN Accelerator command-line interface for the HP EFS WAN Accelerator. It lists commands, syntax, parameters, and example usage.

Online Documentation

The HP system documentation set is periodically updated with new information. To access the most current version of the HP system documentation and other technical information, consult the HP support site located at <http://www.hp.com>.

Related Reading

To learn more about network storage systems and network administration, consult the following books:

- ◆ *Microsoft Windows 2000 Server Administrator's Companion* by Charlie Russell and Sharon Crawford (Microsoft Press, January 2000)
- ◆ *Common Internet File System (CIFS) Technical Reference* by the Storage Networking Industry Association (Storage Networking Industry Association, 2002)
- ◆ *TCP/IP Illustrated, Volume I, The Protocols* by W. R. Stevens (Addison-Wesley, 1994)
- ◆ *Internet Routing Architectures (2nd Edition)* by Bassam Halabi (Cisco Press, 2000)

Contacting HP

This section describes how to contact HP.

NOTE: Do not load any other software on your HP StorageWorks EFS WAN Accelerator, as doing so will void your support agreement and you will not be able to receive HP technical support.

Technical Support

Telephone numbers for worldwide technical support are listed on the following HP web site: <http://www.hp.com/support>. From this web site, select the country of origin. For example, the North American technical support number is 800-633-3600.

NOTE: For continuous quality improvement, calls may be recorded or monitored.

Be sure to have the following information available before calling:

- ◆ Technical support registration number (if applicable)
- ◆ Product serial numbers
- ◆ Product model names and numbers
- ◆ Applicable error messages
- ◆ Operating system type and revision level
- ◆ Detailed, specific questions

HP Storage Web Site

The HP web site has the latest information on this product, as well as the latest drivers. Access the storage site at: <http://www.hp.com/country/us/eng/prodserv/storage.html>. From this web site, select the appropriate product or solution.

HP NAS Services Web Site

The HP NAS Services site allows you to choose from convenient HP Care Pack Services packages or implement a custom support solution delivered by HP ProLiant Storage Server specialists and/or our certified service partners. For more information see us at http://www.hp.com/hps/storage/ns_nas.html.

CHAPTER 1

Overview of the HP EFS WAN Accelerator

In This Chapter

This chapter introduces the HP StorageWorks Enterprise File Services WAN Accelerator Manager (EFS WAN Accelerator Manager). This chapter includes the following sections:

- ◆ [“Overview of the HP EFS WAN Accelerator,” next](#)
- ◆ [“HP EFS WAN Accelerator Registration” on page 16](#)
- ◆ [“HP EFS WAN Accelerator Groups” on page 16](#)
- ◆ [“EFS WAN Accelerator Manager Polling Interval” on page 17](#)
- ◆ [“Configuration Backups” on page 17](#)
- ◆ [“EFS WAN Accelerator Manager Command-Line Interface” on page 18](#)
- ◆ [“Batch Configurations For HP EFS WAN Accelerator Groups” on page 19](#)

Overview of the HP EFS WAN Accelerator

The EFS WAN Accelerator Manager enables you to configure, administer, and manage groups of HP EFS WAN Accelerators from a central location.

For the EFS WAN Accelerator Manager to communicate with an HP EFS WAN Accelerator, you must perform the initial network configuration for each HP EFS WAN Accelerator in the HP system using the configuration wizard and the Management Console. For detailed information, see the *HP StorageWorks Enterprise File Services WAN Accelerator Installation and Configuration Guide* and the *HP StorageWorks Enterprise File Services WAN Accelerator Management Console User's Guide*.

You can monitor groups of HP EFS WAN Accelerators in your HP system using the EFS WAN Accelerator Manager. Monitoring activities can be applied to groups of HP EFS WAN Accelerators or to specific HP EFS WAN Accelerators and the connections to its peer appliance. Monitoring groups of HP EFS WAN Accelerators provides a high-level overview of the health and status of each HP EFS WAN Accelerator in that group, while monitoring individual HP EFS WAN Accelerators provides detailed statistics for the HP EFS WAN Accelerator and its peers.

HP EFS WAN Accelerator Registration

To centrally manage remote HP EFS WAN Accelerators, you must first register each HP EFS WAN Accelerator in your HP system with the EFS WAN Accelerator Manager. To register a remote HP EFS WAN Accelerator you need the following information:

- ◆ the remote IP address of the HP EFS WAN Accelerator (this IP address must be reachable from the EFS WAN Accelerator Manager).
- ◆ the username and password of the account through which the configuration must be performed.

HP EFS WAN Accelerator Groups

After an HP EFS WAN Accelerator is registered with the EFS WAN Accelerator Manager, it is available to be placed into an *appliance group*. An appliance group is a collection of remote HP EFS WAN Accelerators that have a common attribute or that can be grouped together for *batch configurations*. A batch configuration is a set of configuration settings that are sent out at the same time through the EFS WAN Accelerator Manager and applied to the the appliance group as a whole.

For example, as administrator, you might create the following groups:

- ◆ **Client HP Appliances.** All the HP EFS WAN Accelerators in your HP system that are installed on the client side of your network.
- ◆ **Server HP Appliances.** All the HP EFS WAN Accelerators in your HP system that are installed on the server side of your network.
- ◆ **Out-of-Path HP Appliances.** All the HP EFS WAN Accelerators in your HP system that are installed as out-of-path devices in your network. For detailed information about out-of-path configurations, see the *HP StorageWorks Enterprise File Services WAN Accelerator Installation and Configuration Guide*.

As administrator you can change all the in-path rules on Client HP EFS WAN Accelerators by selecting the Client HP EFS WAN Accelerator group in the Appliance Setup: Serves, Rules, Fixed-Target page. For detailed information, see [“Setting In-Path Rules for Appliance Groups” on page 91](#).

There is a default group labeled **all** which contains all registered HP EFS WAN Accelerators in your HP system. Each HP EFS WAN Accelerator can be in one or more appliance groups. Every HP EFS WAN Accelerator registered in the EFS WAN Accelerator Manager belongs to the default group **all**, and no HP EFS WAN Accelerator can be deleted from this group. Appliance groups can contain zero, one, or more HP EFS WAN Accelerators.

You can set the following configuration settings for appliance groups:

- ◆ **Base Service Settings.** For example, you can set the in-path, out-of-path, enable appliance authentication, and failover support for groups of remote HP EFS WAN Accelerators.
- ◆ **In-Path Rules.** You can configure auto-discovery, fixed-target, and pass through rules for groups of HP EFS WAN Accelerators.
- ◆ **Alarms.** You can set the CPU, data store, memory paging, and software version mismatch alarms for groups of HP EFS WAN Accelerators. You can also set email notification for events, failures, and Simple Network Management Protocol (SNMP) traps for groups of HP EFS WAN Accelerators.
- ◆ **Local and Remote Logging.** You can set local and remote logging settings to report system logs for groups of HP EFS WAN Accelerators.
- ◆ **Upgrade Software.** You can upgrade the HP EFS WAN Accelerator software from a central location for groups of HP EFS WAN Accelerators using the EFS WAN Accelerator Manager.
- ◆ **Start and Stop Service.** You can start, stop, and restart the HP EFS WAN Accelerator service for groups of HP EFS WAN Accelerators using the EFS WAN Accelerator Manager.
- ◆ **Reboot HP Appliances.** You can reboot groups of HP EFS WAN Accelerators using the EFS WAN Accelerator Manager.
- ◆ **Send CLI Commands.** You can send sets of **HP** command-line interface commands to groups of HP EFS WAN Accelerators using the EFS WAN Accelerator Manager.

EFS WAN Accelerator Manager Polling Interval

You can set how often remote HP EFS WAN Accelerators are polled for status information. The current minimum poll time is 1 minute. The default value is 5 minutes.

After the interval has been reached, a query of the remote HP EFS WAN Accelerators begins. If at the next interval, the last query has not finished, the interval is skipped.

Configuration Backups

If you make changes to the network services, in-path rules, alarms, or logging settings for groups of remote HP EFS WAN Accelerators you have the option to backup the current configuration on the EFS WAN Accelerator Manager before you make the configuration change.

The configuration backup:

1. Saves the current configuration on the EFS WAN Accelerator Manager as:

`cmc_backup_DATETIMESTAMP`

2. Saves and activates the current configuration on the appliance as:

`cmc_cfg`

3. Continues with the configuration change.

NOTE: The **DATETIMESTAMP** is calculated from the current time of the HP EFS WAN Accelerator, not the current time on the EFS WAN Accelerator Manager. The **DATETIMESTAMP** is in the form of YYYYMMDDHHMMSS.

IMPORTANT: If you do not backup the current configuration, all changes are made to the current, running configuration on the HP EFS WAN Accelerator in your HP system.

EFS WAN Accelerator Manager Command-Line Interface

The EFS WAN Accelerator Manager has a command-line interface (EFS WAN Accelerator Manager CLI) which contains a subset of the commands available on the HP EFS WAN Accelerator.

NOTE: The EFS WAN Accelerator Manager CLI cannot be used for central management of remote HP EFS WAN Accelerators. It can only be used to configure the HP StorageWorks Enterprise File Services WAN Accelerator Manager.

The EFS WAN Accelerator Manager CLI can be used to perform local appliance configuration such as:

- ◆ Network interface configuration (including hostname, DNS, hosts, routes, and so forth)
- ◆ Logging
- ◆ Time and date
- ◆ Software upgrades

For detailed information, see [Appendix A, "Command-Line Interface for HP EFS WAN Accelerator Manager."](#)

Batch Configurations For HP EFS WAN Accelerator Groups

You can send a set of HP EFS WAN Accelerator CLI commands to a group of remote HP EFS WAN Accelerators to perform *batch configurations*. For example, you can:

- ◆ Enter multiple CLI commands (one per line).
- ◆ Send the CLI command to a group of appliances and return the results.
- ◆ Perform a backup of the configuration on the HP EFS WAN Accelerator before issuing the CLI commands.
- ◆ Receive email when the set of CLI commands have finished.
- ◆ View a report for each HP EFS WAN Accelerator after submission is complete.

NOTE: The last command you issue must be the **configuration write** command for your configuration changes to be saved.

CHAPTER 2

Installing and Configuring the HP EFS WAN Accelerator Manager

In This Chapter

This chapter describes how to install and configure the HP StorageWorks Enterprise File Services WAN Accelerator Manager (HP EFS WAN Accelerator Manager). This chapter includes the following sections:

- ◆ “Checking Your Inventory,” next
- ◆ “Preparing Your Site for Installation” on page 22
- ◆ “Required Tools and Equipment” on page 22
- ◆ “Required Configuration Information” on page 22
- ◆ “Mounting the EFS WAN Accelerator Manager to a Rack” on page 23
- ◆ “Powering On the EFS WAN Accelerator Manager” on page 25
- ◆ “Connecting to the EFS WAN Accelerator Manager” on page 26
- ◆ “Configuring the EFS WAN Accelerator Manager” on page 26
- ◆ “Connecting to the HP EFS WAN Accelerator Manager” on page 29
- ◆ “Navigating in the HP EFS WAN Accelerator Manager” on page 33

Checking Your Inventory

Your shipping carton contains the following items:

- ◆ The HP StorageWorks Enterprise File Services WAN Accelerator Manager
- ◆ One CAT-5E straight-through cable
- ◆ One RS-232 serial extension cable
- ◆ One power cable (there could also be a power cable specific to your region or country)
- ◆ One rail kit
- ◆ Documentation on CD-ROM appropriate for your product

If any items are damaged or missing, go to <http://www.hp.com/support> for replacement or repair.

Preparing Your Site for Installation

The HP StorageWorks Enterprise File Services WAN Accelerator Manager is completely assembled with all the equipment parts in place and securely fastened. The appliance is ready for installation with no further assembly required.

Before you install the HP StorageWorks Enterprise File Services WAN Accelerator Manager make sure your site meets the following requirements:

- ◆ A standard electronic environment where the ambient temperature is between 10° C and 35° C (50° F to 95° F) and the relative humidity is between 10% and 90% (non-condensing). For detailed information, see [Appendix C, “Technical Specifications and Regulatory Information.”](#)
- ◆ An Ethernet connection available within the standard Ethernet limit
- ◆ Space on a two or four post 19-inch rack
- ◆ A clean power source dedicated to computer devices and other electronic devices

Required Tools and Equipment

You need the following tools and equipment to mount the HP StorageWorks Enterprise File Services WAN Accelerator Manager to a rack:

- ◆ A standard 19 inch Telco-type mounting rack (The HP StorageWorks Enterprise File Services WAN Accelerator Manager requires 1 U of rack space.) If mounting to a two-post rack, go to <http://www.racksolutions.com/hp>.
- ◆ Appropriate screwdriver for screws if mounting into a threaded-hole rack. Refer to the instructions that came with the rack mount kit. Refer to the *HP ProLiant DL320 Generation 3 Server User Guide* that came with your system for important rack planning instructions.

Required Configuration Information

Before you begin the installation and configuration process gather the necessary configuration information.

- ◆ Host name for the HP StorageWorks Enterprise File Services WAN Accelerator Manager
- ◆ IP address for the HP StorageWorks Enterprise File Services WAN Accelerator Manager
- ◆ Netmask
- ◆ Default gateway
- ◆ Domain Name Service (DNS) server IP address

- ◆ Domain name for the system
- ◆ IP addresses of the remote HP EFS WAN Accelerators
- ◆ User names and passwords for each of the accounts on the remote HP EFS WAN Accelerators

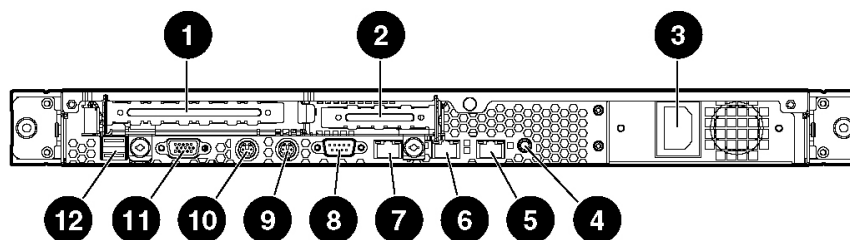
Mounting the EFS WAN Accelerator Manager to a Rack

To mount the HP EFS WAN Accelerator Manager to a rack, refer to the instructions that came with your rack.

IMPORTANT: Do not mount the HP StorageWorks Enterprise File Services WAN Accelerator Manager in a position that obstructs its fan housing.

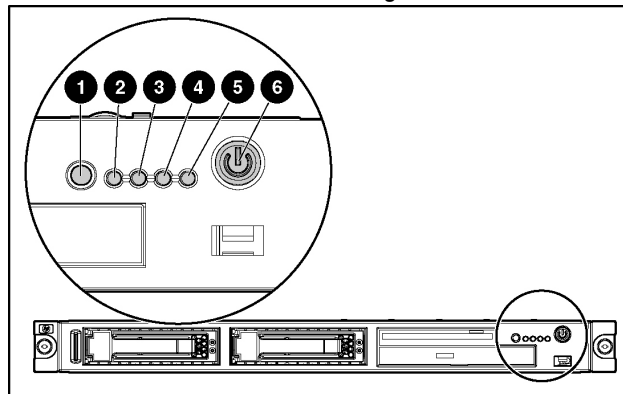
HP EFS WAN Accelerator Manager Hardware

Figure 2-1. HP EFS WAN Accelerator Manager Hardware: Rear Panel



Item	Description
1	PCI-X expansion slot 2, full-length 64 bit/133 MHz 3.3 V (optional PCI Express slot 1, x8)
2	PCI-X expansion slot 1, low-profile half-length 64 bit/100 MHz 3.3 V
3	Power supply
4	UID button/LED
5	10/100/1000 NIC 1
6	10/100/1000 NIC 2
7	iLO management port
8	Serial connector
9	Mouse connector
10	Keyboard connector
11	Video connector
12	USB connectors

Figure 2-2. HP EFS WAN Accelerator Manager: Front Panel LEDs and Buttons



Item	Description	Status
1	UID button/LED	Blue = Identification is activated. Flashing blue = System is being remotely managed. Off = Identification is
2	Internal health LED	Green = System health is normal. Amber = System is degraded. Red = System critical. Off = System health is normal (when in standby mode).

Item	Description	Status
3	NIC 1 link/activity LED	Green = Network link exists. Flashing green = Network link and activity exist. Off = No link to network exists.
4	NIC 2 link/activity LED	Green = Network link exists. Flashing green = Network link and activity exist. Off = No link to network exists.
5	Drive activity LED	Green = Drive activity is normal. Amber = Drive failure occurred. Off = No drive activity.
6	Power On/Standby button and system power LED	Green = System is on. Amber = System is shut down, but power is still applied. Off = Power cord is not attached, power supply failure has occurred, no power supplies are installed, facility power is not available, or the DC-to-DC converter is not installed.

NIC Port Labeling Terminology Note

Labeling for the NIC ports varies on the Riverbed Technology, Inc. Steelhead appliance and the HP ProLiant DL320 and DL380 servers. To avoid confusion, the table below outlines the different labels for the NIC ports.

Product	Label 1	Label 2
Riverbed Technology, Inc. Steelhead appliance	Primary	AUX
HP ProLiant 320	NIC1	NIC2
HP ProLiant 380	1	2

Powering On the EFS WAN Accelerator Manager

The following section describes how to connect and power on the HP StorageWorks Enterprise File Services WAN Accelerator Manager.

To connect the power to the HP StorageWorks Enterprise File Services WAN Accelerator Manager

1. Plug in the Alternating Current (AC) power cord into the HP StorageWorks Enterprise File Services WAN Accelerator Manager.
2. Plug in the AC power cord into an uninterrupted AC power source ([Figure 2-1 on page 23](#), item 3).
3. Press the Power On/Standby button on the front of the HP StorageWorks Enterprise File Services WAN Accelerator Manager ([Figure 2-2 on page 24](#), item 6).
4. Check the status lights on the front and rear of the HP StorageWorks Enterprise File Services WAN Accelerator Manager.

Connecting to the EFS WAN Accelerator Manager

To access the configuration wizard and HP EFS WAN Accelerator Manager command-line interface, you establish a serial connection using a terminal emulator program.

To connect to the HP StorageWorks Enterprise File Services WAN Accelerator Manager

1. Plug in the serial cable into the serial connector port on the HP StorageWorks Enterprise File Services WAN Accelerator Manager ([Figure 2-1 on page 23](#), item 8).
2. Start your terminal emulation program such as Tera Term Pro or Hyper Terminal. The terminal device must have the following settings:
 - ◆ Baud rate: 9600 bps
 - ◆ Data bits: 8
 - ◆ Parity: none
 - ◆ Stop bits: 1
 - ◆ No flow control
3. Log in as administrator. For example:

```
login as: admin
Sent username "admin"
password: password
```
4. Check the system and disk status lights ([Figure 2-2 on page 24](#)).

Configuring the EFS WAN Accelerator Manager

After you have established connection, you configure the HP StorageWorks Enterprise File Services WAN Accelerator Manager using the configuration wizard.

To configure the HP StorageWorks Enterprise File Services WAN Accelerator Manager

1. To start the configuration wizard, enter **yes** at the system prompt. For example:

Configuration wizard.

Do you want to use the wizard for initial configuration? yes

TIP: Press ENTER to enter the default value. If you mistakenly answer **no**, you can start the configuration wizard by entering **configuration jump-start** at the system prompt.

2. To configure the host name for the HP StorageWorks Enterprise File Services WAN Accelerator Manager, enter the host name at the system prompt. For example:

Step 1: Hostname? minna

TIP: Press '?' for help. Press CTRL B to go back to the previous step.

3. You are given the option to enable the Dynamic Host Configuration Protocol (DHCP) to automatically assign an IP address to the primary interface (that is, the HP StorageWorks Enterprise File Services WAN Accelerator Manager). HP recommends you do not set DHCP. The default value is **no**. For example:

Step 2: Use DHCP? no

4. To configure the primary interface for the HP StorageWorks Enterprise File Services WAN Accelerator Manager, enter the IP address you want to assign to the appliance at the system prompt. For example:

Step 3: Primary IP address? 10.0.0.74

5. To configure the netmask, enter the netmask address at the system prompt. For example:

Step 4: Netmask? 255.255.0.0

6. To configure the default gateway for the HP StorageWorks Enterprise File Services WAN Accelerator Manager, enter the IP address at the system prompt. For example:

Step 5: Default gateway? 10.0.0.1

This value sets the default gateway to your network for optimization, logging, Simple Network Management Protocol (SNMP) traps, and HP StorageWorks Enterprise File Services WAN Accelerator Manager access.

7. To configure the primary Domain Name Service (DNS) server, enter the IP address of the DNS server at the system prompt. For example:

Step 6: Primary DNS server? 10.0.0.2

8. To configure the domain name for the system, enter the domain name at the system prompt. For example:

Step 7: Domain name? domain.com

NOTE: If you configure a domain name, you can enter host names in the system without the domain name.

9. You are given the option to assign a password to the administrator user (**admin**). Type a password at the system prompt. For example:

Step 8: Admin password? xxxyyy

HP strongly recommends that you change the default password at this time. The password must be minimum of 6 characters. The default administrator password is **password**.

10. To set the speed on the primary interface, type a value at the system prompt. The default value is **auto**. For example:

Step 10: Set the primary interface speed? auto

11. To set the duplex mode on the primary interface, type a value at the system prompt. The default value is **auto**. For example:

Step 11: Set the primary interface duplex? [auto] full

12. The system confirms your settings.

You have entered the following information:

1. Hostname: minna
2. Use DHCP: no
3. Primary IP address: 10.0.0.74
4. Netmask: 255.255.0.0
5. Default gateway: 10.0.0.1
6. Primary DNS server: 10.0.0.2
7. Domain name: domain.com
8. Admin password: (unchanged)
9. Copy config from another site: no
10. Set the primary interface speed: auto
11. Set the primary interface duplex: full

To change an answer, enter the step number to return to.
Otherwise hit <enter> to save changes and exit.

Choice:

The HP EFS WAN Accelerator configuration wizard automatically saves your initial configuration settings.

13. To log out of the system, enter the following command at the system prompt:

exit

Connecting the EFS WAN Accelerator Manager to Your Network

To connect the HP StorageWorks Enterprise File Services WAN Accelerator Manager to your network

You use a CAT-5E straight-through to connect to your network.

1. Plug in a straight-through cable into the NIC1 (Primary) port ([Figure 2-1 on page 23](#), item 5) of the HP StorageWorks Enterprise File Services WAN Accelerator Manager and the LAN switch (this can be any port on your LAN switch that acts as a host).

You can now register HP EFS WAN Accelerators in your HP system using the HP StorageWorks Enterprise File Services WAN Accelerator Manager.

Verifying Your Connections

To verify your connections

Perform the following tasks to verify that you have properly connected the HP StorageWorks Enterprise File Services WAN Accelerator Manager.

1. You can connect to the HP EFS WAN Accelerator Manager CLI using one of the following options:
 - ◆ An ASCII terminal or emulator that can connect to the serial console. It must have the following settings: 9600 baud, 8 bits, no parity, 1 stop bit, and no flow control.
 - ◆ A computer with a Secure Shell (**ssh**) client that is connected to the HP EFS WAN Accelerator NIC1 (Primary) port.

2. At the system prompt, enter the following command:

```
ssh admin@host.domain
```

or

```
ssh admin@ipaddress
```

3. You are prompted for the administrator password. This is the password you set in the configuration wizard.

4. At the system prompt, **ping** from management interface.

```
ping -I <primary-IP-address> <primary-default-gateway>
```

Connecting to the HP EFS WAN Accelerator Manager

After you configure the HP StorageWorks Enterprise File Services WAN Accelerator Manager, you can monitor and manage your HP system using the HP StorageWorks Enterprise File Services WAN Accelerator Manager graphical user interface.

Connecting to the HP EFS WAN Accelerator Manager

You can connect to the HP EFS WAN Accelerator Manager through any supported Web browser. To connect to the HP EFS WAN Accelerator Manager you must know the host, domain, and administrator password that you assigned during the initial setup of the HP StorageWorks Enterprise File Services WAN Accelerator Manager.

NOTE: Cookies and Javascript must be enabled in your browser.

To connect to the HP EFS WAN Accelerator Manager

1. Enter the URL for the HP EFS WAN Accelerator Manager in the location box of your browser:

protocol://host.domain

protocol is `http` or `https`. The secure HyperText Transport Protocol (HTTPS) uses Secure Sockets Layer (SSL) protocol to ensure a secure environment. If you use HTTPS to connect you are prompted to inspect and verify the SSL key.

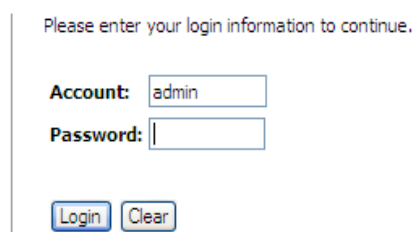
host is the host name you assigned the HP StorageWorks Enterprise File Services WAN Accelerator Manager during initial configuration. If your DNS server maps that IP address to a name, you can specify the DNS name.

domain is the full domain name for the HP StorageWorks Enterprise File Services WAN Accelerator Manager.

NOTE: Alternatively, you can specify the IP address instead of the host and domain. For example: **`http://169.254.169.254/`**.

The HP EFS WAN Accelerator Manager graphical user interface appears, displaying the Login page.

Figure 2-3. Login Page



Please enter your login information to continue.

Account:

Password:

2. In the **Account** text box, type the user login: **admin**, **monitor**, or a login from a Remote Authentication Dial-In User Service (RADIUS), or a Terminal Access Controller Access Control System (TACACS+) database. The default login is **admin**.

Users with administrator (**admin**) privileges can configure and administer the HP system. Users with monitor (**monitor**) privileges can view connected HP EFS WAN Accelerators, reports, and system logs.

3. In the **Password** text box, type the password you assigned in the HP EFS WAN Accelerator Manager configuration wizard.
4. Click **Login** to display the Home: Welcome page.

Figure 2-4. HP EFS WAN Accelerator Manager Home: Welcome Page

Home : Local Setup : Appliance Setup : Reports : System Log : Help Logged in as: **admin** (logout)

Home

- Common Tasks**
 - Configure Appliances
 - Configure Groups
- Common Remote Tasks**
 - Configure Alarms
 - Configure Rules
- Troubleshooting**
 - View System Logs

Welcome

Welcome to the WAN Accelerator Manager hosted on **kosi**!

Summary of Appliances in All [edit]

Appliance	Model	Health
No appliances.		

Appliance Info

Config:	initial
Version:	1.2_hp_rc3
Serial:	EA0LMRG745
Up Time:	5d 22h 19m 11s
Last Poll:	2005/02/10 22:57:41

The HP EFS WAN Accelerator Manager Home: Welcome Page

The HP EFS WAN Accelerator Manager Home: Welcome page includes the following information.

Field	Description
Summary of Appliances	<p>A list of HP EFS WAN Accelerators in your HP system. An HP EFS WAN Accelerator can be in one of the following states:</p> <ul style="list-style-type: none">• Healthy. All HP EFS WAN Accelerator systems are functioning properly.• Degraded. An HP EFS WAN Accelerator alarm has been triggered. Alarms are triggered for software version mismatches, abnormal memory page swapping activity, when the CPU utilization threshold has been reached, or on the HP ProLiant DL380-3010 and the HP ProLiant DL380-5010 if there is a RAID (Redundant Array of Independent Disks) issue.• Critical. The HP EFS WAN Accelerator service is not functioning or the HP EFS WAN Accelerator is in bypass mode.• Unlicensed. The HP EFS WAN Accelerator does not have a base license key or an expired license.• Corrupted Store. The HP EFS WAN Accelerator data store is corrupt. To clear the data store, see Appendix , “Starting, Stopping, and Restarting the HP EFS WAN Accelerator Service on Appliance Groups.”• Service Halted. The HP EFS WAN Accelerator has detected a software error in the HP EFS WAN Accelerator service that prevents the service from continuing. The HP EFS WAN Accelerator service shuts down and remains shutdown. You must contact HP technical support at http://www.hp.com if this alarm occurs.
Version	The software version number that is currently installed on the HP EFS WAN Accelerator Manager.
Serial	The serial number for the HP EFS WAN Accelerator Manager.
Up Time	Total time the HP EFS WAN Accelerator Manager has been active.
Last Poll	The total time since the last request for status information.

The HP EFS WAN Accelerator Manager: Home: Welcome page also contains links in the left menu to the following configuration tools:

- ◆ Click **Configure Appliances** to display the Local Setup: Appliances page. You can view a list of registered appliances in the system and unregister appliances. For details, see [“Registering HP EFS WAN Accelerators” on page 64.](#)
- ◆ Click **Configure Groups** to display the Local Setup: Groups page. You can view a list of your HP EFS WAN Accelerator groups, and add, remove, and edit groups. Click the group name to view a list of appliances in the group. For details, see [“Configuring Service Settings for Appliance Groups” on page 81.](#)
- ◆ Click **Configure Alarms** to display the Appliance Setup: Alarms page. You can configure alarm settings for each HP EFS WAN Accelerator group in your HP system. For details, see [“Setting Alarm Thresholds for Appliance Groups” on page 98.](#)

- ◆ Click **Configure Rules** to display the Appliance Setup: Service, Rules page. You can configure in-path rules for each of the HP EFS WAN Accelerator groups in your HP system. For details, see [“Setting Alarms and Fault Reporting for Appliance Groups”](#) on page 97.

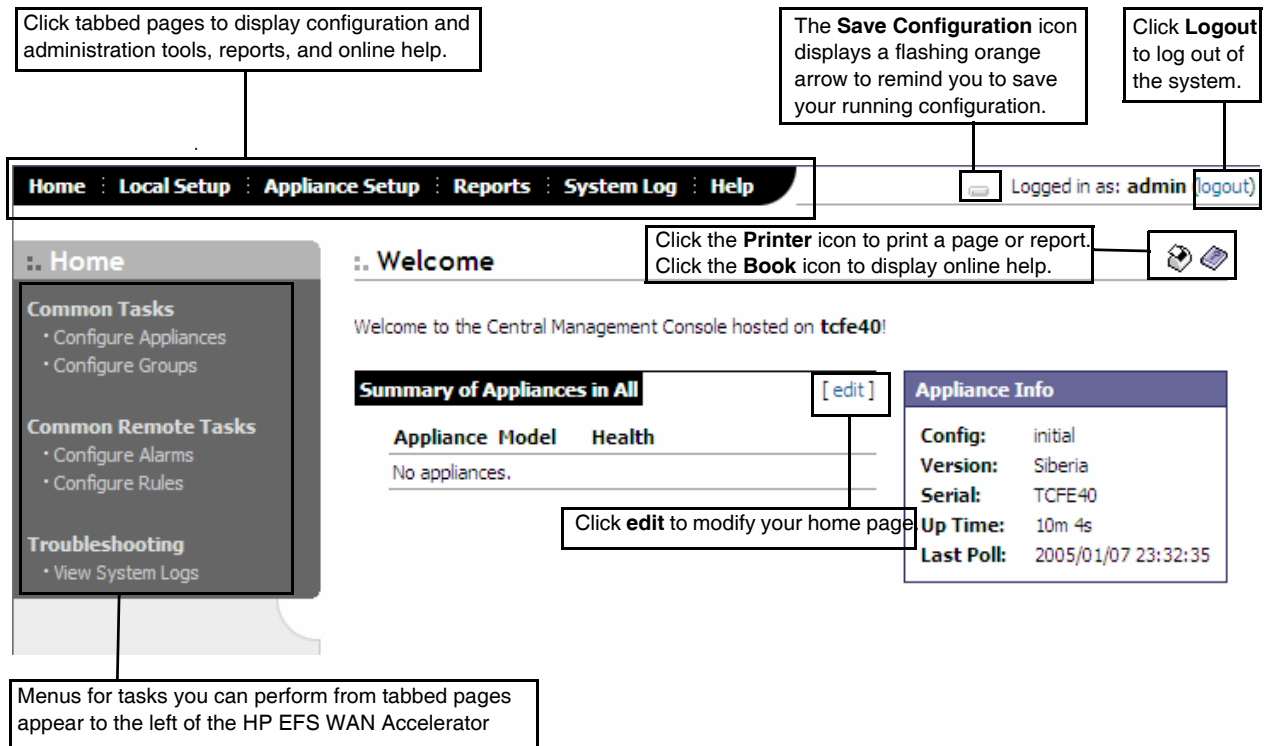
Navigating in the HP EFS WAN Accelerator Manager

You navigate to the tools and reports available to you in the HP EFS WAN Accelerator Manager using hyperlinked tabs and menus.

Navigating in the HP EFS WAN Accelerator Manager

The following figure illustrates the tabs and menus that appear on each page of the HP EFS WAN Accelerator Manager.

Figure 2-5. HP EFS WAN Accelerator Manager Home: Welcome Page



TIP: You can revisit the Home: Welcome page by clicking Home in the navigation bar.

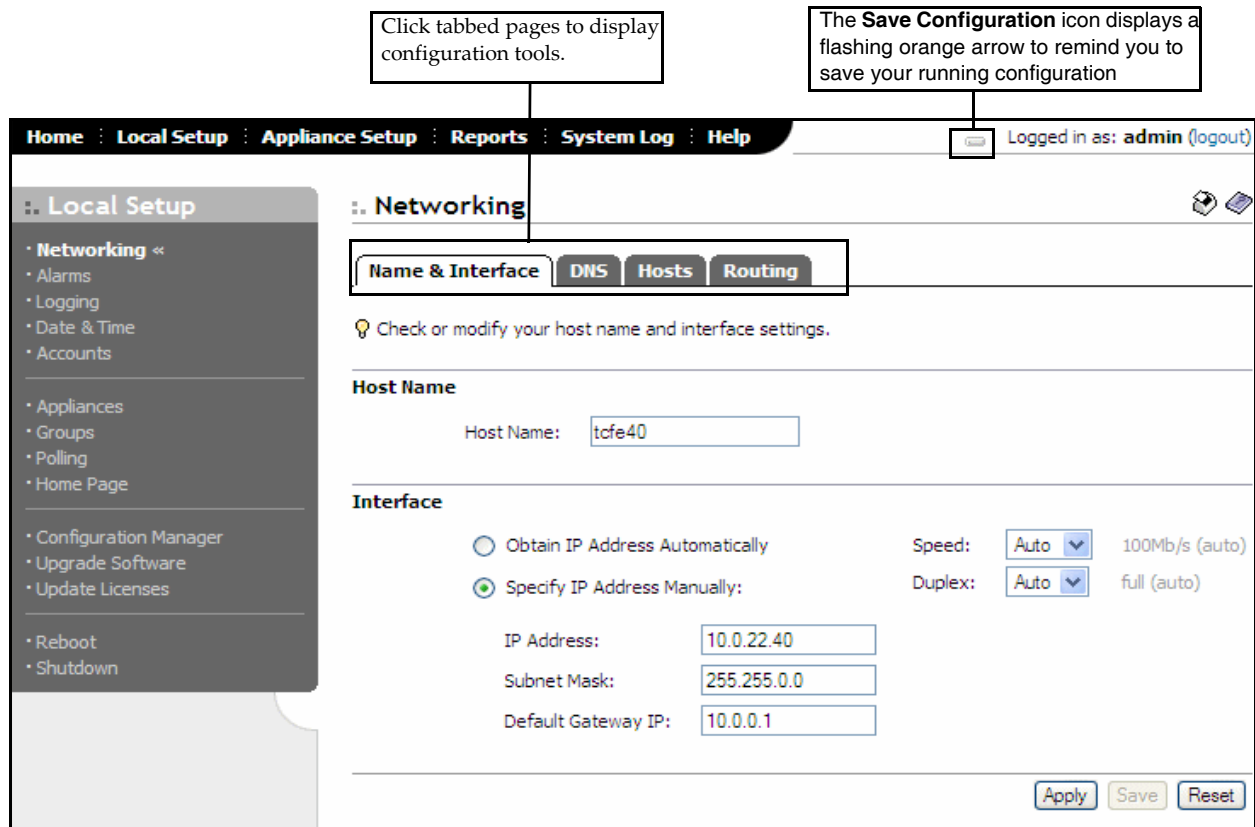
[Figure 2-6 on page 35](#) shows the tabbed pages that appear on each page of the HP EFS WAN Accelerator Manager. You click the hyperlinked tabs to display tools and reports to help you monitor and manage your HP system. The following table summarizes the purpose of each tabbed page.

Tab	Purpose
Home	Display HP system status and provide links to commonly used configuration tools. For details about the configuration tools, see Chapter 3, “Using the HP EFS WAN Accelerator Manager.”
Local Setup	Configure and administer the HP EFS WAN Accelerator Manager. For details about the tools provided in this menu, see Chapter 3, “Using the HP EFS WAN Accelerator Manager.”
Appliance Setup	Configure service settings and in-path rules for groups of HP EFS WAN Accelerators. You can also upgrade software, reboot HP EFS WAN Accelerators, and send HP EFS WAN Accelerator CLI commands to appliance groups in the HP system. For details, see “Configuring Service Settings for Appliance Groups” on page 81.
Reports	View system reports. For details, see Chapter 3, “Viewing Appliance Group Reports.”
Logging	View HP system logs. For details, see Chapter 3, “Viewing HP StorageWorks Enterprise File Services WAN Accelerator Manager Logs.”
Help	Display contact information for technical support, the HP EFS WAN Accelerator Manager guide (including HP EFS WAN Accelerator Manager CLI commands), and the online-help table of contents. For details, see Chapter 3, “Getting Help.”

When you click a hyperlinked tab, a menu for the tasks you can perform appears on the left of the HP EFS WAN Accelerator Manager. For example, when you click the Local Setup tab, the Local Setup menu appears.

Some of the pages also contain tabbed pages. For example if you select Local Setup tabbed pages appear as shown in [Figure 2-6](#).

Figure 2-6. Local Setup: Networking, Names & Interfaces Page



Menu items are hyperlinks to pages that display tools and reports to help you manage and administer your HP system. When you click a menu item, you display the primary tool or report for the menu choice.

Saving Your Configuration

As you **Apply** page settings, the values are applied to the running configuration, the **Save Configuration** icon displays a flashing orange arrow, and an explanation point appears in the left menu to remind you to permanently save your configuration settings to memory.

For detailed information about saving your configuration to memory, see [“Managing HP EFS WAN Accelerator Manager Configurations” on page 73.](#)

Printing Console Pages and Reports

You can print HP EFS WAN Accelerator Manager pages and reports.

To print pages and reports

- Click the **Printer** icon in the upper right-side of the page to display a printer-friendly version of the page.



Displaying Online Help

You can view online help that describes each page of the HP EFS WAN Accelerator Manager and the tasks that you can perform.

To display online help



- Click the **Book** icon in the upper right-side of the page. The help for the page appears in a new browser window.

The Help tab provides you with the following links to help you administer and manage the HP EFS WAN Accelerator:

- ◆ **Technical Support.** HP technical support.
- ◆ **Command-Line Interface.** The *HP EFS WAN Accelerator Manager User's Guide*, which includes a reference for the HP EFS WAN Accelerator Manager command-line interface.
- ◆ **Online Help.** A table of contents of the help topics in the HP EFS WAN Accelerator Manager.

For detailed information, see ["Getting Help" on page 114](#).

Logging Out

Click the **Logout** link to end your session and require subsequent users to authenticate their session. When you click the **Logout** link, the HP EFS WAN Accelerator Manager displays the Logout page.

To log out of the HP EFS WAN Accelerator Manager

- Click **Logout** to display the Logout page and log out of the HP EFS WAN Accelerator Manager.

CHAPTER 3

Using the HP EFS WAN Accelerator Manager

In This Chapter

This chapter describes how to administer and manage your HP system using the HP StorageWorks Enterprise File Services WAN Accelerator Manager (HP EFS WAN Accelerator Manager). This chapter includes the following sections:

- ◆ [“Setting HP EFS WAN Accelerator Manager Network Parameters,”](#) next
- ◆ [“Setting HP EFS WAN Accelerator Manager Alarms and Fault Reporting”](#) on page 45
- ◆ [“Setting HP EFS WAN Accelerator Manager Logging Options”](#) on page 50
- ◆ [“Setting the HP EFS WAN Accelerator Manager Date and Time”](#) on page 53
- ◆ [“Managing Accounts on the HP EFS WAN Accelerator Manager”](#) on page 56
- ◆ [“Registering HP EFS WAN Accelerators”](#) on page 64
- ◆ [“Creating HP EFS WAN Accelerator Groups”](#) on page 68
- ◆ [“Setting the HP EFS WAN Accelerator Manager Polling Interval”](#) on page 71
- ◆ [“Modifying the HP EFS WAN Accelerator Manager Home Page”](#) on page 72
- ◆ [“Managing HP EFS WAN Accelerator Manager Configurations”](#) on page 73
- ◆ [“Upgrading Your HP EFS WAN Accelerator Manager Software”](#) on page 76
- ◆ [“Rebooting the HP EFS WAN Accelerator Manager”](#) on page 80
- ◆ [“Configuring Service Settings for Appliance Groups”](#) on page 81
- ◆ [“Setting Alarms and Fault Reporting for Appliance Groups”](#) on page 97
- ◆ [“Setting Logging Options for Appliance Groups”](#) on page 103
- ◆ [“Upgrading Software for Appliance Groups”](#) on page 106
- ◆ [“Starting, Stopping, and Restarting the HP EFS WAN Accelerator Service on Appliance Groups”](#) on page 108
- ◆ [“Rebooting Appliance Groups”](#) on page 109

- ◆ [“Sending HP EFS WAN Accelerator CLI Commands to Appliance Groups” on page 110](#)
- ◆ [“Viewing Appliance Group Reports” on page 111](#)
- ◆ [“Viewing HP StorageWorks Enterprise File Services WAN Accelerator Manager Logs” on page 113](#)
- ◆ [“Getting Help” on page 114](#)

This chapter assumes that you have installed, configured, and connected to the HP EFS WAN Accelerator Manager.

IMPORTANT: As you finish entering values for each configuration page, click **Apply** to test your settings. When you **Apply** page settings, the values are applied to the running configuration—they are not saved permanently until you write them to memory. The **Save Configuration** icon displays a flashing orange arrow to remind you to save your configuration. To write your configuration settings to memory, see [“Managing HP EFS WAN Accelerator Manager Configurations” on page 73](#).

Setting HP EFS WAN Accelerator Manager Network Parameters

The following section describes how to configure the local network parameters for the HP StorageWorks Enterprise File Services WAN Accelerator Manager. It contains the following sections:

- ◆ [“Setting the HP EFS WAN Accelerator Manager Host Name and Primary Interface,” next](#)
- ◆ [“Setting the HP EFS WAN Accelerator Manager Domain Name Service” on page 40](#)
- ◆ [“Setting HP EFS WAN Accelerator Manager Hosts” on page 42](#)
- ◆ [“Setting HP EFS WAN Accelerator Manager Static Network Routes” on page 43](#)

Setting the HP EFS WAN Accelerator Manager Host Name and Primary Interface

You set the host name and interface settings in the Local Setup: Networking, Network & Interfaces page.

During the initial configuration of the HP StorageWorks Enterprise File Services WAN Accelerator Manager, you assigned a host name and primary interface to the appliance. Check or modify your settings in the Local Setup: Networking, Network & Interfaces page.

If your network routers do not automatically negotiate the speed and duplex, you must manually set the speed and duplex for the primary interface.

To set the host name and primary interface

1. Click the Local Setup tab to display the Local Setup: Networking, Name & Interfaces page.

Figure 3-1. Local Setup: Networking, Name & Interfaces Page

Home Local Setup Appliance Setup Reports System Log Help Logged in as: admin (logout)

Local Setup

- Networking «
- Alarms
- Logging
- Date & Time
- Accounts
- Appliances
- Groups
- Polling
- Home Page
- Configuration Manager
- Upgrade Software
- Update Licenses
- Reboot
- Shutdown

Networking

Name & Interface DNS Hosts Routing

Check or modify your host name and interface settings.

Host Name

Host Name: tcf40

Interface

Obtain IP Address Automatically Speed: Auto 100Mb/s (auto)

Specify IP Address Manually: Duplex: Auto full (auto)

IP Address: 10.0.22.40

Subnet Mask: 255.255.0.0

Default Gateway IP: 10.0.0.1

Apply Save Reset

2. Under Host Name, type a host name in the **Host Name** text box.
3. Under Interface, choose the method for obtaining an IP address for the primary interface:
 - ◆ Click **Obtain an IP address Automatically** to have the HP EFS WAN Accelerator automatically find the IP address for the primary interface. (A Dynamic Host Configuration Protocol (DHCP) server must be available so that the HP StorageWorks Enterprise File Services WAN Accelerator Manager can request the IP address from it.)
 - ◆ Click **Specify IP Address Manually** to assign a specific appliance as the primary interface:
 - ◆ Type the IP address in the **IP Address** text box.
 - ◆ Type the subnet mask in the **Subnet Mask** text box.

- ◆ Type the IP address for the default gateway in the **Default Gateway IP** text box.

4. Click **1000**, **100**, or **10** in the **Speed** drop-down list to set the speed for the primary interface. The default value is **Auto**.
5. Click **Full** or **Half** in the **Duplex** drop-down list to set the duplex speed for the primary interface. The default value is **Auto**.
6. Click **Apply** to apply your settings to the running configuration. (Apply your settings to test a new configuration before committing it memory.)
7. Click **Save** to write your settings to memory or click **Reset** to return the setting to its previous value.

Setting the HP EFS WAN Accelerator Manager Domain Name Service

During the initial setup of the HP StorageWorks Enterprise File Services WAN Accelerator Manager you specified the primary Domain Name Service (DNS) server and domain for the system. Check or modify your settings in the Local Setup: Networking, DNS page.

NOTE: HP recommends you configure the Local Setup: Networking, DNS page.

You can also set secondary and tertiary DNS name servers in the Local Setup: Networking, DNS page.

You can provide additional domains for which the HP StorageWorks Enterprise File Services WAN Accelerator Manager can search. If you specify domains in the **Domain Search** text box, the HP StorageWorks Enterprise File Services WAN Accelerator Manager automatically finds the appropriate domain for each of the hosts that you enter in the system.

To set the DNS server

1. Click the Local Setup tab to display the Local Setup: Networking, Name & Interfaces page.
2. Click the DNS tab to display the Local Setup: Networking, DNS page.

Figure 3-2. Local Setup: Networking, DNS Page

Home Local Setup Appliance Setup Reports System Log Help Logged in as: admin (logout)

Local Setup

- **Networking** «
 - Alarms
 - Logging
 - Date & Time
 - Accounts
- Appliances
- Groups
- Polling
- Home Page
- Configuration Manager
- Upgrade Software
- Update Licenses
- Reboot
- Shutdown

Networking

Name & Interface DNS Hosts Routing

Check or modify your DNS settings.

Name Servers

Primary DNS IP: 10.0.0.2

Secondary DNS IP:

Tertiary DNS IP:

Set Name Servers

Domain Search

Domain(s):

nbttech.com

Remove Selected Domain

Add Domain: Add Domain

Save Reset

3. Under Name Servers, type the IP address for the primary name server in the **Primary DNS IP** text box.
4. Type the IP address for the secondary name server (if any) in the **Secondary DNS IP** text box.
5. Type the IP address for the tertiary name server (if any) in the **Tertiary DNS IP** text box.
6. Click **Set Name Servers** to apply your settings.

7. Under Domain Search, type a domain name in the **Add Domain** text box and click **Add Domain** to configure a domain for which the HP StorageWorks Enterprise File Services WAN Accelerator Manager will search. (To remove a domain name from the list, click **Remove Selected Domain**.)
8. Click **Save** to write your settings to memory or click **Reset** to return the settings to their previous values.

Setting HP EFS WAN Accelerator Manager Hosts

Optionally, you can specify hosts in the Local Setup: Networking, Hosts page if you are not using DNS to resolve host names and IP addresses in your system or if you want to override mapping for a host or IP address.

To set a host

1. Click the Local Setup tab to display the Local Setup: Networking, Name & Interfaces page.
2. Click the Hosts tab to display the Local Setup: Networking, Hosts page.

Figure 3-3. Local Setup: Networking, Hosts Page

Home Local Setup Appliance Setup Reports System Log Help

Logged in as: admin (logout)

Local Setup

- Networking <<
 - Alarms
 - Logging
 - Date & Time
 - Accounts
- Appliances
- Groups
- Polling
- Home Page
- Configuration Manager
- Upgrade Software
- Update Licenses
- Reboot
- Shutdown

Networking

Name & Interface DNS Hosts Routing

This page is **optional**. Configure host name to IP mappings only if you are not using DNS to find hosts in your network, or if some hosts do not have DNS entries.

IP	Hostname
127.0.0.1	localhost

Remove Selected Entries

Add New Host

Host IP:

Host Name:

Add Entry

Save Reset

3. Under Add New Host, type the IP address for the new host in the **Host IP** text box.
4. Type the host name for the new host in the **Host Name** text box.
5. Click **Add Entry** to apply your settings to the running configuration.
6. Click **Save** to write your settings to memory or click **Reset** to return the settings to their previous values.

TIP: To remove a host, click the check box next to the name and click **Remove Selected Entries**. This action applies the settings to the running configuration. Click **Save** to write your settings to memory or click **Reset** to return the settings to their previous values.

Setting HP EFS WAN Accelerator Manager Static Network Routes

Optionally, configure the Local Setup: Networking, Routing page if your network configuration requires additional static network routing rules.

To set a static network route

1. Click the Local Setup tab to display the Local Setup: Networking, Name & Interfaces page.
2. Click the Routing tab to display the Local Setup: Networking, Routing page.

Figure 3-4. Local Setup: Networking, Routing Page

Home | Local Setup | Appliance Setup | Reports | System Log | Help

Logged in as: admin (logout)

Local Setup

- Networking «
- Alarms
- Logging
- Date & Time
- Accounts

Networking

Name & Interface | DNS | Hosts | **Routing**

This page is **optional**. Use this page only if your network configuration requires additional static network routing rules.

Destination	Mask	Gateway	Status
<input type="checkbox"/> default	0.0.0.0	10.0.0.1	User Configured
10.0.0.0	255.255.0.0	0.0.0.0	

[Remove Selected Routes](#)

Add New Route:

Destination:

Netmask:

Gateway:

[Add Route](#)

[Save](#) [Reset](#)

3. Under Add New Route, type the destination IP address in the **Destination** text box.
4. Type the netmask in the **Netmask** text box.
5. Type the IP address for the gateway in the **Gateway** text box.
6. Click **Add Route** to add the route to the network routing list and apply your settings to the running configuration.
7. Click **Save** to write your settings to memory or click **Reset** to return the settings to their previous values.

TIP: To remove a primary route, click the check box next to the name and click **Remove Selected Routes**. This action applies the settings to the running configuration. Click **Save** to write your settings to memory or click **Reset** to return the settings to their previous values.

Setting HP EFS WAN Accelerator Manager Alarms and Fault Reporting

The following section describes how to set alarm thresholds, email notification parameters for events and failures, and Simple Network Management Protocol (SNMP) communities and traps for the HP StorageWorks Enterprise File Services WAN Accelerator Manager. It contains the following sections:

- ◆ [“Setting HP EFS WAN Accelerator Manager Alarm Thresholds” on page 45](#)
- ◆ [“Setting HP EFS WAN Accelerator Manager Fault Notification” on page 46](#)
- ◆ [“Setting HP EFS WAN Accelerator Manager SNMP Traps” on page 48](#)

Setting HP EFS WAN Accelerator Manager Alarm Thresholds

To set the alarm threshold

You set alarm thresholds and activate alarms for extended memory paging and software mismatches in the Local Setup: Alarms, Alarms page.

Alarms have rising and reset thresholds. When an alarm reaches the rising threshold, it is activated; it is reset when it reaches the lowest or reset threshold. After an alarm is triggered, it is not triggered again until it has fallen below the reset threshold.

1. Click the Local Setup tab to display the Local Setup: Networking, Name & Interfaces page.
2. Click Alarms in the left menu to display the Local Setup: Alarms, Alarms page.

Figure 3-5. Local Setup: Alarms, Alarms Page

Home | Local Setup | Appliance Setup | Reports | System Log | Help

Logged in as: admin (logout)

Local Setup

- Networking
- Alarms** «
- Logging
- Date & Time
- Accounts

- Appliances
- Groups
- Polling
- Home Page

- Configuration Manager
- Upgrade Software
- Update Licenses

- Reboot
- Shutdown

Alarms

Alarms | Notification | SNMP Traps

Check and modify your alarm settings.

CPU Alarm

☒ Raise Alarm When CPU Utilization Reaches:

Rising Threshold:

Reset Threshold:

Additional Alarms

☒ Raise Alarm When Extended Memory Paging Activity is Detected

Apply Save Reset

3. Under CPU Alarm, click **Raise Alarm When CPU Utilization Reaches** and type a percentage in the **Rising Threshold** and **Reset Threshold** text boxes.
4. Under Additional Alarms, click **Raise Alarm When Extended Memory Paging Activity Detected** to raise an alarm when abnormal memory page swapping occurs.
5. Click **Apply** to apply your settings to the running configuration. (Apply your settings to test a new configuration before committing it memory.)
6. Click **Save** to write your settings to memory or click **Reset** to return the settings to their previous values.

Setting HP EFS WAN Accelerator Manager Fault Notification

You set email notification parameters for events and failures for the HP StorageWorks Enterprise File Services WAN Accelerator Manager in the Local Setup: Alarms, Notification page.

IMPORTANT: Make sure you provide a valid Simple Mail Transfer Protocol (SMTP) server to ensure that the users you specify receive email notifications for events and failures.

To set event and failure notification

1. Click the Local Setup tab to display the Local Setup: Networking, Name & Interfaces page.
2. Click Alarms in the left menu to display the Local Setup: Alarms page.
3. Click the Notification tab to display the Local Setup: Alarms, Notification page.

Figure 3-6. Local Setup: Alarms, Notification Page

[Home](#)
[Local Setup](#)
[Appliance Setup](#)
[Reports](#)
[System Log](#)
[Help](#)

Local Setup

- Networking
- Alarms** «
- Logging
- Date & Time
- Accounts

- Appliances
- Groups
- Polling
- Home Page

- Configuration Manager
- Upgrade Software
- Update Licenses

- Reboot
- Shutdown

Alarms

Notification

SNMP Traps

Check and modify your alarm notification settings.

Events

☒ Report Events to SNMP Agent
 ☒ Report Events via Email

Email Addresses: (separate each address by a space)

Failures

☒ Report Failures to Technical Support
 ☒ Report Failures via Email

Email Addresses: (separate each address by a space)

SMTP Server for Emails

SMTP Server:

SNMP Settings

Sys Contact:

Sys Location:

Read Only Community Name:

public

Apply

Save

Reset

HP EFS WAN ACCELERATOR MANAGER USER'S GUIDE

47

4. Under Events, click **Report Events to SNMP Agent** to report activity to an SNMP agent.
5. Click **Report Failures via Email** and type the email addresses of the users you want to notify of events in the **Email Addresses** text box. Separate each email address by a space.
6. Under Failures, click **Report Failures to Technical Support** to have serious failures such as system crashes reported to HP technical support. HP recommends that you activate this feature so that problems are promptly corrected.
7. Click **Report Failures via Email** and type the email addresses of the users you want to notify of failures in the **Email Addresses** text box. Separate each email address by a space.
8. Under SMTP Server for Emails, type a valid SMTP server in the **SMTP Server** text box.

NOTE: External DNS and external access for SMTP traffic is required for this feature to function.

9. Under SNMP Settings, type the SNMP contact in the **Sys Contact** text box.
10. Type the SNMP location in the **Sys Location** text box.
11. Type the read-only community name in the **Read Only Community Name** text box. This is the read-only string that gathers status and statistics from the edge border router. For example: ReAdOnLy.
12. Click **Apply** to apply your settings to the running configuration. (Apply your settings to test a new configuration before committing it memory.)
13. Click **Save** to write your settings to memory or click **Reset** to return the settings to their previous values.

Setting HP EFS WAN Accelerator Manager SNMP Traps

Optionally, set SNMP traps for the HP StorageWorks Enterprise File Services WAN Accelerator Manager in the Local Setup: Alarms, SNMP Traps page. Traps are messages sent by an SNMP agent that indicate the occurrence of an event.

To set an SNMP trap

1. Click the Local Setup tab to display the Local Setup: Networking, Names & Interfaces page.
2. Click Alarms in the left menu to display the Local Setup: Alarms page.
3. Click the SNMP Traps tab to display the Local Setup: Alarms, SNMP Traps page.

Figure 3-7. Local Setup: Alarms, SNMP Traps Page

Home Local Setup Appliance Setup Reports System Log Help Logged in as: admin (logout)

Local Setup

- Networking
- Alarms** «
- Logging
- Date & Time
- Accounts

- Appliances
- Groups
- Polling
- Home Page

- Configuration Manager
- Upgrade Software
- Update Licenses

- Reboot
- Shutdown

Alarms

Alarms Notification **SNMP Traps**

This page is **optional**. Configure SNMP trap receivers if you would like to receive SNMP traps when alarms are triggered.

Trap Receiver	Community	Type	Enabled
No trap receivers.			

Remove Selected Receivers Enable Disable

Add New Trap Receiver:

Receiver IP:

Community:

Type: **v1** ▼

Enabled: **True** ▼

Add Trap Receiver

Save Reset

4. Under Add New Trap Receiver, type the IP address for the SNMP trap in the **Receiver IP** text box.
5. Type the SNMP community name in the **Community** text box.
6. Select the SNMP version number either **v1** or **v2** from the **Type** drop-down list.
7. Select **True** or **False** from the **Enabled** drop-down list to enable or disable SNMP traps.
8. Click **Add Trap Receiver** to apply the settings to the running configuration.
9. Click **Save** to write your settings to memory or click **Reset** to return the settings to their previous values.

TIP: To remove an SNMP trap receiver, click the check box next to the name and click **Remove Selected Receivers**. This action applies the settings to the running configuration. Click **Save** to write your settings to memory or click **Reset** to return the settings to their previous values.

TIP: To disable an SNMP trap receiver, click the check box next to the name and click **Disable**. To enable an SNMP trap receiver, click the check box next to the name and click **Enable**.

Setting HP EFS WAN Accelerator Manager Logging Options

The following section describes how to set local and remote logging for the HP StorageWorks Enterprise File Services WAN Accelerator Manager. It contains the following sections:

- ◆ [“Setting HP EFS WAN Accelerator Manager Local Logging,”](#) next
- ◆ [“Setting HP EFS WAN Accelerator Manager Remote Logging Servers”](#) on page 52

Setting HP EFS WAN Accelerator Manager Local Logging

You set log severity levels and rotation parameters for local HP StorageWorks Enterprise File Services WAN Accelerator Manager logs in the Local Setup: Logging, Local page.

To set the log severity level and log rotation

1. Click the Local Setup tab to display the Local Setup: Networking, Name & Interfaces page.
2. Click Logging in the left menu to display the Local Setup: Logging, Local page.

Figure 3-8. Local Setup: Logging, Local Page

Home Local Setup Appliance Setup Reports System Log Help

Logged in as: admin (logout)

Local Setup

- Networking
- Alarms
- **Logging** «
- Date & Time
- Accounts

- Appliances
- Groups
- Polling
- Home Page

- Configuration Manager
- Upgrade Software
- Update Licenses

- Reboot
- Shutdown

Logging

Local Remote

Check and modify your local logging settings.

Log Filtering

Minimum Severity: Notice

Log Rotation

☒ Rotate every Day

☐ Rotate when log reaches 16 MB

Keep at most 10 log file(s)

Apply Save Reset

3. Under Log Filtering, select a severity level from the **Minimum Severity** drop-down list.
4. Under Log Rotation, click **Rotate Every** and select **Day**, **Week**, or **Month** from the drop-down list to rotate logs according to a specific time period.
5. Click **Rotate when log reaches** and type a number to rotate logs according to a log file size.
6. Type a number in the **Keep at most** text box to set a limit for the number of logs to store.
7. Click **Apply** to apply your settings to the running configuration. (Apply your settings to test a new configuration before committing it memory.)
8. Click **Save** to write your settings to memory or click **Reset** to return the settings to their previous values.

Setting HP EFS WAN Accelerator Manager Remote Logging Servers

To set a remote system log server

Optionally, you set remote system log (syslog) servers for the HP StorageWorks Enterprise File Services WAN Accelerator Manager in the Local Setup: Networking, Logging, Remote page.

1. Click the Local Setup tab to display the Local Setup: Networking, Name & Interfaces page.
2. Click Logging in the left menu to display the Local Setup: Logging page.
3. Click the Remote tab to display the Local Setup: Logging, Remote page.

Figure 3-9. Local Setup: Logging, Remote Page

Home : Local Setup : Appliance Setup : Reports : System Log : Help

Logged in as: **admin** (logout)

Local Setup

- Networking
- Alarms
- **Logging** «
- Date & Time
- Accounts

• Appliances

• Groups

• Polling

• Home Page

• Configuration Manager

• Upgrade Software

• Update Licenses

• Reboot

• Shutdown

Logging

Local Remote

This page is **optional**. Add any remote syslog servers you want to use for logging.

Remote Syslog Server	Min. Severity
No remote syslog servers.	

Remove Selected Servers

Add Remote Syslog Server:

Server IP:

Minimum Severity: Notice

Add Server

Save Reset

4. Under Add Remote Syslog Server, type the IP address for the remote server in the **Server IP** text box.
5. Select the severity level for the logs from the **Minimum Severity** drop-down list.
6. Click **Add Server** to apply your settings to the running configuration.
7. Click **Save** to write your settings to memory or click **Reset** to return the settings to their previous values.

TIP: To remove a remote server, click the check box next to the name and click **Remove Selected Servers**. This action applies the settings to the running configuration. Click **Save** to write your settings to memory or click **Reset** to return the settings to their previous values.

Setting the HP EFS WAN Accelerator Manager Date and Time

The following section describes how to set the date and time or Network Time Protocol (NTP) servers for the HP StorageWorks Enterprise File Services WAN Accelerator Manager. It contains the following sections:

- ◆ [“Setting the HP EFS WAN Accelerator Manager Date and Time,”](#) next
- ◆ [“Setting HP EFS WAN Accelerator Manager NTP Servers”](#) on page 55

Setting the HP EFS WAN Accelerator Manager Date and Time

You set the date and time for the HP StorageWorks Enterprise File Services WAN Accelerator Manager in the Local Setup: Date and Time page.

To set the date and time

1. Click the Local Setup tab to display the Local Setup: Networking, Name & Interfaces page.
2. Click Date & Time in the left menu to display the Local Setup: Date & Time, Set Date & Time page.

Figure 3-10. Local Setup: Date & Time, Set Date & Time Page

The screenshot displays the 'Local Setup' interface with the 'Date & Time' section active. The left sidebar lists various setup categories, with 'Date & Time' highlighted. The main content area shows two tabs: 'Set Date & Time' (active) and 'NTP Servers'. Below the tabs, a message states: 'Set the date, time, and timezone for this appliance.' Under the 'Appliance Date & Time' heading, there are two radio button options: 'Set Time Using NTP Time Synchronization' (which is selected) and 'Set Time Manually:'. The manual settings section includes a 'Date' text box containing '2005/01/08' and a 'Time' text box containing '00:05:43', both with a note '(Only editable with NTP disabled)'. Below this, the 'Appliance Time Zone' is set to 'GMT' in a dropdown menu. At the bottom right, there are three buttons: 'Apply', 'Save', and 'Reset'.

3. Under Appliance Date & Time, choose a method for determining the date and time:
 - ◆ Click **Set Time Using NTP Time Synchronization** if you want to synchronize the date and time using a NTP synchronization. (Enabling NTP time synchronization enables the time stamps on the HP EFS WAN Accelerator logs to match those of other computers using NTP time synchronization. This option is not required for proper HP EFS WAN Accelerator operation.)
 - ◆ Click **Set Time Manually** if you want to manually set the date and time:
 - ◆ Type the current date in the **Date** text box. Use the following format: YYYY/MM/DD.
 - ◆ Type the current time in the **Time** text box. Use the following format: HH:MM:SS.
4. Under Appliance Time Zone, select your time zone from the **Time Zone** drop-down list. The default time zone is **GMT** (Greenwich Mean Time).
5. Click **Apply** to apply your settings to the running configuration. (Apply your settings to test a new configuration before committing it memory.)
6. Click **Save** to write your settings to memory or click **Reset** to return the settings to their previous values.

Setting HP EFS WAN Accelerator Manager NTP Servers

To set an NTP server

If you enabled NTP synchronization, set your NTP servers for the HP StorageWorks Enterprise File Services WAN Accelerator Manager in the Local Setup: Date & Time, NTP Servers page. Enabling NTP time synchronization enables your logs to be synchronized. Time synchronization is not required for HP StorageWorks Enterprise File Services WAN Accelerator Manager operation.

1. Click the Local Setup tab to display the Local Setup: Networking, Name & Interfaces page.
2. Click Date & Time in the left menu to display the Local Setup: Date & Time page.
3. Click the NTP Servers tab to display the Local Setup: Date & Time, NTP Servers page.

Figure 3-11. Local Setup: Date & Time, NTP Servers Page

Home | Local Setup | Appliance Setup | Reports | System Log | Help

Logged in as: **admin** (logout)

Local Setup

- Networking
- Alarms
- Logging
- **Date & Time** «
- Accounts

- Appliances
- Groups
- Polling
- Home Page

- Configuration Manager
- Upgrade Software
- Update Licenses

- Reboot
- Shutdown

Date & Time

Set Date & Time | **NTP Servers**

💡 If NTP time synchronization is enabled, please configure your remote NTP servers here.

Server	Version	Enabled
No NTP servers.		

Remove Selected Servers | Enable | Disable

Add New NTP Server:

Server IP:

Version:

Enabled:

Add Server

Save | Reset

4. Under Add New NTP Server, type the IP address for the NTP server in the **Server IP** text box.
5. Select the NTP protocol version number from the **Version** drop-down list.
6. Select the mode, either **True** or **False** from the **Enable** drop-down list. The **True** value enables synchronization. The **False** value disables synchronization.
7. Click **Add Server** to apply the settings to the running configuration.
8. Click **Save** to write your settings to memory or click **Reset** to return the settings to their previous values.

TIP: To remove an NTP server, click the check box next to the name and click **Remove Selected Servers**. This action applies the settings to the running configuration. Click **Save** to write your settings to memory or click **Reset** to return the settings to their previous values.

TIP: To disable synchronization for a server, click the check box next to the NTP server name and click **Disable**. To enable synchronization for a server, click the check box next to the NTP server name and click **Enable**.

Managing Accounts on the HP EFS WAN Accelerator Manager

The following section describes how to set administrator and monitor passwords, Remote Authentication Dial-In User Service (RADIUS), and Terminal Access Controller Access Control System (TACACS+) authentication on the HP StorageWorks Enterprise File Services WAN Accelerator Manager. It contains the following sections:

- ◆ [“Setting HP EFS WAN Accelerator Manager Authentication Methods,”](#) next
- ◆ [“Setting the HP EFS WAN Accelerator Manager Administrative Password”](#) on page 58
- ◆ [“Setting the HP EFS WAN Accelerator Manager Monitor Password”](#) on page 59
- ◆ [“Setting Up an HP EFS WAN Accelerator Manager RADIUS Server”](#) on page 60
- ◆ [“Setting Up an HP EFS WAN Accelerator Manager TACACS+ Server”](#) on page 62

Setting HP EFS WAN Accelerator Manager Authentication Methods

You can prioritize local, RADIUS, and TACACS authentication methods for the system and set the authorization policy and default user for RADIUS and TACACS+ authentication systems on the HP StorageWorks Enterprise File Services WAN Accelerator Manager in the Local Setup: Accounts, General page.

IMPORTANT: Make sure to put the authentication methods in the order in which you want authentication to occur. If authorization fails on the first method, the next method is attempted, and so forth, until all the methods have been attempted.

For detailed information about configuring RADIUS and TACACS+ servers to accept login requests from the HP EFS WAN Accelerator, see the *HP StorageWorks Enterprise File Services WAN Accelerator Command-Line Interface Reference Manual*.

To set the authentication methods

1. Click the Local Setup tab to display the Local Setup: Networking, Name & Interfaces page.
2. Click Accounts in the left menu to display the Local Setup: Accounts, General page.

Figure 3-12. Local Setup: Accounts, General Page

Home | Local Setup | Appliance Setup | Reports | System Log | Help

Logged in as: admin (logout)

Local Setup

- Networking
- Alarms
- Logging
- Date & Time
- **Accounts** <<
- Appliances
- Groups
- Polling
- Home Page
- Configuration Manager
- Upgrade Software
- Update Licenses
- Reboot
- Shutdown

Account Management

General | Admin | Monitor | RADIUS | TACACS+

Check and modify your authentication methods. Please make sure to put the methods in the order you want authentication to occur.

Authentication Methods

Method 1: Local

Method 2: None

Method 3: None

Advanced Authorization (Optional - For RADIUS/TACACS+ Only)

Authorization Policy: Remote First

Default User: Admin (Remote First/Local Only)

Apply Save Reset

3. Under Authentication Methods, select **Local**, **RADIUS**, or **TACACS+** from the **Method 1** drop-down list. Make sure you put the authentication methods in the order in which you want them to occur.

If authorization fails on the first method, the next method is attempted, and so forth until all the methods have been attempted.

4. Select **None**, **Local**, **RADIUS**, or **TACACS+** from the **Method 2** drop-down list.
5. Select **None**, **Local**, **RADIUS**, or **TACACS+** from the **Method 3** drop-down list.
6. If you are using RADIUS or TACACS+ authentication systems, under Advanced Authentication, select **Remote First**, **Remote Local**, or **Remote Only** from the **Authentication Policy** drop-down list.
7. If you are using RADIUS or TACACS+ authentication systems, under Advanced Authentication, select **Admin** or **Monitor** from the **Default User** drop-down list.
8. Click **Apply** to apply your settings to the running configuration. (Apply your settings to test a new configuration before committing it memory.)
9. Click **Save** to write your settings to memory or click **Reset** to return the settings to their previous values.

Setting the HP EFS WAN Accelerator Manager Administrative Password

During the initial setup of the HP StorageWorks Enterprise File Services WAN Accelerator Manager you set the administrator password. Check or modify your setting in the Local Setup: Account Management, Admin page. (The default administrator password is **password**.)

The administrator user has full privileges in the HP StorageWorks Enterprise File Services WAN Accelerator Manager. For example, as an administrator you can set and modify configuration settings, restart the HP EFS WAN Accelerator service, reboot the appliance, and create and view performance and system reports.

The password must have a minimum of 6 characters.

To set the administrator password

1. Click the Local Setup tab to display the Local Setup: Networking, Name & Interfaces page.
2. Click Accounts in the left menu to display the Local Setup: Account Management, General page.
3. Click the Admin tab to display the Local Setup: Account Management, Admin page.

Figure 3-13. Local Setup: Account Management, Admin Page

4. Under Change Password, type the new administrative password in the **New Password** text box. The password must have a minimum of 6 characters and the characters must be letters or numbers only.
5. Retype the new administrative password in the **Confirm New Password** text box.
6. Click **Change Password** to apply your settings to the running configuration.
7. Click **Save** to write your settings to memory or click **Reset** to return the settings to their previous values.

Setting the HP EFS WAN Accelerator Manager Monitor Password

You set the monitor user password for the HP StorageWorks Enterprise File Services WAN Accelerator Manager in the Local Setup: Account Management, Monitor page. A monitor user can view connected HP StorageWorks Enterprise File Services WAN Accelerator Managers and reports; a monitor user cannot make configuration changes to the HP StorageWorks Enterprise File Services WAN Accelerator Manager.

To set the monitor password

1. Click the Local Setup tab to display the Local Setup: Networking Name & Interfaces page.
2. Click Accounts in the left menu to display the Local Setup: Account Management, General page.
3. Click the Monitor tab to display the Local Setup: Account Management, Monitor page.

Figure 3-14. Local Setup: Account Management, Monitor Page.

The screenshot shows the HP EFS WAN Accelerator Manager web interface. At the top is a navigation bar with links: Home, Local Setup, Appliance Setup, Reports, System Log, and Help. The user is logged in as 'admin' with a 'logout' link. On the left is a 'Local Setup' sidebar menu with options: Networking, Alarms, Logging, Date & Time, Accounts (selected), Appliances, Groups, Polling, Home Page, Configuration Manager, Upgrade Software, Update Licenses, Reboot, and Shutdown. The main content area is titled 'Account Management' and has tabs for General, Admin, Monitor (selected), RADIUS, and TACACS+. Under the 'Monitor' tab, there is a 'Change Password' section with two text input fields: 'New Password:' and 'Confirm New Password:'. Below these fields is a 'Change Password' button. At the bottom right of the main content area are 'Save' and 'Reset' buttons.

4. Under Change Password, type the new monitor password in the **New Password** text box. The password must have a minimum of 6 characters.
5. Retype the new monitor password in the **Confirm New Password** text box.
6. Click **Change Password** to apply your settings to the running configuration.
7. Click **Save** to write your settings to memory or click **Reset** to return the settings to their previous values.

Setting Up an HP EFS WAN Accelerator Manager RADIUS Server

Optionally, set up RADIUS server authentication for the HP StorageWorks Enterprise File Services WAN Accelerator Manager in the Local Setup: Account Management, RADIUS page. RADIUS is an access control protocol that uses a challenge and response method for authenticating users.

For detailed information about configuring RADIUS and TACACS+ servers to accept login requests from the HP EFS WAN Accelerator, see the *HP StorageWorks Enterprise File Services WAN Accelerator Command-Line Interface Reference Manual*.

To set up a RADIUS server

1. Click the Local Setup tab to display the Local Setup: Networking Name & Interfaces page.
2. Click Accounts in the left menu to display the Local Setup: Account Management, General page.
3. Click the RADIUS tab to display the Local Setup: Account Management, RADIUS page.

Figure 3-15. Local Setup: Account Management, RADIUS Page.

Home Local Setup Appliance Setup Reports System Log Help Logged in as: **admin** (logout)

Local Setup

- Networking
- Alarms
- Logging
- Date & Time
- **Accounts** «
- Appliances
- Groups
- Polling
- Home Page
- Configuration Manager
- Upgrade Software
- Update Licenses
- Reboot
- Shutdown

Accounts

General Admin Monitor RADIUS TACACS+

This page is **optional**. Configure your RADIUS authentication settings.

Server IP	Port	Key	Timeout	Retries	Enabled
No RADIUS servers.					

Remove Selected Servers Enable Disable

Add New RADIUS Server:

Server IP:

Authentication Port:

Server Key:

Timeout: seconds (1-60)

Retries: (0-5)

Enabled:

Global Settings:

Server Key:

Timeout: seconds (1-60)

Retries: (0-5)

Update Settings

Add Server

Save Reset

4. Under Add New RADIUS Server, type the RADIUS server IP address in the **Server IP** text box.
5. Type the port for the RADIUS server in the **Authentication Port** text box.
6. Type the server key in the **Server Key** text box.
7. Type the timeout period in the **Timeout** text box.
8. Select **True** or **False** to enable or disable the service.
9. Click **Add Server** to apply your settings to the running configuration.
10. Under Global Settings, type the server key in the **Server Key** text box.
11. Type the timeout period in the **Timeout** text box.
12. Type the number of time you want to allow the user to retry authentication in the **Retries** text box.
13. Click **Update Settings** to update your global RADIUS settings.
14. Click **Save** to write your settings to memory or click **Reset** to return the settings to their previous values.

TIP: To remove a server, click the check box next to the name and click **Remove Selected Servers**. This action applies the settings to the running configuration. Click **Save** to write your settings to memory or click **Reset** to return the settings to their previous values.

TIP: To disable authentication for a server, click the check box next to the server name and click **Disable**. To enable authentication for a server, click the check box next to the server name and click **Enable**.

Setting Up an HP EFS WAN Accelerator Manager TACACS+ Server

Optionally, configure TACACS+ server authentication in the TACACS+ in the Local Setup: Accounts, TACACS+ page. TACACS+ is an authentication protocol that allows a remote access server to forward a logon password for a user to an authentication server to determine whether access is allowed to a given system.

For detailed information about configuring RADIUS and TACACS+ servers to accept login requests from the HP EFS WAN Accelerator, see the *HP StorageWorks Enterprise File Services WAN Accelerator Command-Line Interface Reference Manual*.

To add a TACACS+ server

1. Click the Local Setup tab to display the Local Setup: Networking Name & Interfaces page.
2. Click Accounts in the left menu to display the Local Setup: Account Management, General page.
3. Click the TACACS+ tab to display the Local Setup: Accounts, TACACS+ page.

Figure 3-16. Local Setup: Accounts, TACACS+ Page.

Home : Local Setup : Appliance Setup : Reports : System Log : Help

Logged in as: admin (logout)

Local Setup

- Networking
- Alarms
- Logging
- Date & Time
- **Accounts** <<
- Appliances
- Groups
- Polling
- Home Page
- Configuration Manager
- Upgrade Software
- Update Licenses
- Reboot
- Shutdown

Accounts

General Admin Monitor RADIUS **TACACS+**

This page is **optional**. Configure your TACACS+ authentication settings.

Server IP	Port	Key	Timeout	Retries	Enabled
No TACACS+ servers.					

Remove Selected Servers Enable Disable

Add New TACACS+ Server:

Server IP:

Authentication Port:

Server Key:

Timeout: seconds (1-60)

Retries: (0-5)

Enabled:

Add Server

Global Settings:

Server Key:

Timeout: seconds (1-60)

Retries: (0-5)

Update Settings

Save Reset

4. Under Add New TACACS+ Server, type the TACACS+ server IP address in the **Server IP** text box.
5. Type the port for the TACACS+ server in the **Authentication Port** text box.
6. Type the server key in the **Server Key** text box.
7. Type the timeout period in the **Timeout** text box.
8. Select **True** or **False** to enable or disable the service.
9. Click **Add Server** to apply your settings to the running configuration.
10. Under Global Settings, type the server key in the **Server Key** text box.
11. Type the timeout period in the **Timeout** text box.
12. Type the number of time you want to allow the user to retry authentication in the **Retries** text box.
13. Click **Update Settings** to update your global TACACS+ settings.
14. Click **Save** to write your settings to memory or click **Reset** to return the settings to their previous values.

TIP: To remove a server, click the check box next to the name and click **Remove Selected Servers**. This action applies the settings to the running configuration. Click **Save** to write your settings to memory or click **Reset** to return the settings to their previous values.

TIP: To disable authentication for a server, click the check box next to the server name and click **Disable**. To enable authentication for a server, click the check box next to the server name and click **Enable**.

Registering HP EFS WAN Accelerators

The following section describes how to register and edit registration parameters for remote HP EFS WAN Accelerators in your HP system. You must register each HP EFS WAN Accelerator in your HP system that you want to administer and manage.

Registering HP EFS WAN Accelerators

You register HP EFS WAN Accelerators to be administered and monitored in the Local Setup: Appliances page. You can also remove, edit, and view a list of registered HP EFS WAN Accelerators in the Local Setup: Appliances page.

IMPORTANT: You must register each HP EFS WAN Accelerator that you want to manage and monitor, then add it to an appliance group before you can use the HP EFS WAN Accelerator Manager centralized configuration and monitoring tools.

To register an HP EFS WAN Accelerator appliance

1. Click the Local Setup tab to display the Local Setup: Networking Name & Interfaces page.
2. Click Appliances in the left menu to display the Local Setup: Appliances page.

Figure 3-17. Local Setup: Appliances Page

Home | Local Setup | Appliance Setup | Reports | System Log | Help

Logged in as: admin (logout)

Local Setup

- Networking
- Alarms
- Logging
- Date & Time
- Accounts
- **Appliances** «
- Groups
- Polling
- Home Page
- Configuration Manager
- Upgrade Software
- Update Licenses
- Reboot
- Shutdown

Appliances

The following is a list of all appliances registered in the system. To edit an appliance's central configuration settings, please click on the appliance in the list below.

Appliance	Model	Health	Version
<input type="checkbox"/> 169.254.169.254 --		--	--

Unregister Selected Appliances

Register a New Appliance:

Appliance Hostname/IP:

Username:

Password:

Register New Appliance

Save Reset

3. Under Register a New Appliance, type the appliance host name or IP address in the **Appliance Hostname/IP** text box.
4. Type the user name of the remote administrator user in the **Username** text box. This is the login the administrator must use to make configuration changes on the remote HP EFS WAN Accelerator. For example, you might have the same login and password for all remote HP EFS WAN Accelerators in an appliance group to ensure security.
5. Type the password for the remote user in the **Password** text box. This is the password the administrator must use to make configuration changes on the remote HP EFS WAN Accelerator.

For example, you might have the same login and password for all remote HP EFS WAN Accelerators in an appliance group to ensure security.

6. Click **Register New Appliance** to register the HP EFS WAN Accelerator in the system.
7. Click **Save** to write your settings to memory or click **Reset** to return the settings to their previous values.

TIP: To remove a server, click the check box next to the name and click **Unregister Selected Appliances**. This action applies the settings to the running configuration. Click **Save** to write your settings to memory or click **Reset** to return the settings to their previous values.

To edit a registered HP EFS WAN Accelerator

1. Click the Local Setup tab to display the Local Setup: Networking Name & Interfaces page.
2. Click Appliances in the left menu to display the Local Setup: Appliances page.

Figure 3-18. Local Setup: Appliances Page

Home : Local Setup : **Appliance Setup** : Reports : System Log : Help

Logged in as: admin (logout)

Local Setup

- Networking
- Alarms
- Logging
- Date & Time
- Accounts
- **Appliances** «
- Groups
- Polling
- Home Page
- Configuration Manager
- Upgrade Software
- Update Licenses
- Reboot
- Shutdown

Appliances

The following is a list of all appliances registered in the system. To edit an appliance's central configuration settings, please click on the appliance in the list below.

Appliance	Model	Health	Version
<input type="checkbox"/> 169.254.169.254 --		--	--

Unregister Selected Appliances

Register a New Appliance:

Appliance Hostname/IP:

Username:

Password:

Register New Appliance

Save Reset

3. Click the name of the appliance you want to edit in the Registered Appliances list. The Local Setup: Appliance: *Appliance Name* page appears.

Figure 3-19. Local Setup: Appliance: *Appliance Name* Page

The screenshot shows the 'Local Setup' page for an appliance with IP 169.254.169.254. The page has a top navigation bar with links: Home, Local Setup, Appliance Setup, Reports, System Log, and Help. The user is logged in as 'admin'. A left sidebar contains a menu with options like Networking, Alarms, Logging, Date & Time, Accounts, Appliances (selected), Groups, Polling, Home Page, Configuration Manager, Upgrade Software, Update Licenses, Reboot, and Shutdown. The main content area is titled 'Appliance: 169.254.169.254' and includes a description: 'Review and update this appliance's central configuration settings.' Below this is a 'Status' section with a message: 'This appliance has not been polled for status yet.' There are three dropdown menus for 'Model', 'Version', and 'Health', all currently set to '--'. Below these are links for 'Launch Management Console' and 'Download Logs'. A 'Peers' section contains a table with headers 'IP', 'Name', 'Model', 'Version', and 'Licenses', and a message 'No peers.' Below the table is an 'Authentication' section with 'Username' and 'Password' text boxes. The 'Username' box contains the text 'marie' and the 'Password' box contains four dots. At the bottom right are three buttons: 'Apply', 'Save', and 'Reset'.

4. Click **Launch Management Console** to open the Management Console in a new browser window. You can modify and save your configuration settings for the remote HP EFS WAN Accelerator from this browser window.
5. Click **Download Logs** to download system logs for the HP EFS WAN Accelerator.
6. To change the HP EFS WAN Accelerator user name, highlight and delete the name from the **Username** text box.
7. Type a new user name in the **Username** text box.
8. To change the HP EFS WAN Accelerator password, highlight and delete the password from the **Password** text box.
9. Type a new password in the **Password** text box.
10. Click **Apply** to apply your settings to the running configuration. (Apply your settings to test a new configuration before committing it memory.)
11. Click **Save** to write your settings to memory or click **Reset** to return the settings to their previous values.

Creating HP EFS WAN Accelerator Groups

Creating HP EFS WAN Accelerator Groups

The following section describes how to create appliance groups and add registered HP EFS WAN Accelerator to appliance groups.

After an HP EFS WAN Accelerator is registered with the HP EFS WAN Accelerator Manager, it is available to be placed into an *appliance group*. An appliance group is a collection of remote HP EFS WAN Accelerators that have a common attribute or that can be grouped together for *batch configurations*. A batch configuration is a set of configuration settings that are sent out at the same time through the HP EFS WAN Accelerator Manager and applied to the the appliance group as a whole.

For example, as administrator, you might create the following groups:

- ◆ **Client HP Appliances.** All the HP EFS WAN Accelerators in your HP system that are installed on the client side of your network.
- ◆ **Server HP Appliances.** All the HP EFS WAN Accelerators in your HP system that are installed on the server side of your network.
- ◆ **Out-of-Path HP Appliances.** All the HP EFS WAN Accelerators in your HP system that are installed as out-of-path devices in your network. For detailed information about out-of-path configurations, see the *HP StorageWorks Enterprise File Services WAN Accelerator Installation and Configuration Guide*.

As administrator you could change all the in-path rules on Client HP EFS WAN Accelerators by selecting the Client HP EFS WAN Accelerator group in the Appliance Setup: Serves, Rules, Fixed-Target page. For detailed information, see [“Setting In-Path Rules for Appliance Groups” on page 91](#).

To create an appliance group

1. Click the Local Setup tab to display the Local Setup: Networking Name & Interfaces page.
2. Click Groups in the left menu to display the Local Setup: Groups page.

Figure 3-20. Local Setup: Groups Page

Home | Local Setup | Appliance Setup | Reports | System Log | Help

Logged in as: admin (logout)

Local Setup

- Networking
- Alarms
- Logging
- Date & Time
- Accounts
- Appliances
- **Groups «**
- Polling
- Home Page
- Configuration Manager
- Upgrade Software
- Update Licenses
- Reboot
- Shutdown

Groups

The following is a list of your configuration groups. To edit the appliances in a group, please click on the group in the list below.

Group	# Appliances
<input type="checkbox"/> 123	0

Remove Selected Groups

Add Group:

Group Name:

Add Group

Save Reset

3. Under Add Groups, type the appliance group name in the **Group Name** text box. For example, **Client HP EFS WAN Accelerators**.
4. Click **Add Group** to add the HP EFS WAN Accelerator group to the system.
5. Click **Save** to write your settings to memory or click **Reset** to return the settings to their previous values.

TIP: To remove a group, click the check box next to the name and click **Unregister Selected Groups**. This action applies the settings to the running configuration. Click **Save** to write your settings to memory or click **Reset** to return the settings to their previous values.

Adding Appliances to a Group

After you have created appliance groups you can add registered HP EFS WAN Accelerators to them.

TIP: You can also register and add HP EFS WAN Accelerators to appliance groups in the Local Setup: Group: Appliance Group page.

To add appliances to a group

1. Click the Local Setup tab to display the Local Setup: Networking Name & Interfaces page.
2. Click Groups in the left menu to display the Local Setup: Groups page.

Figure 3-21. Local Setup: Groups Page

Home | Local Setup | Appliance Setup | Reports | System Log | Help

Logged in as: admin (logout)

Local Setup

- Networking
- Alarms
- Logging
- Date & Time
- Accounts
- Appliances
- **Groups** «
- Polling
- Home Page
- Configuration Manager
- Upgrade Software
- Update Licenses
- Reboot
- Shutdown

Groups

The following is a list of your configuration groups. To edit the appliances in a group, please click on the group in the list below.

Group	# Appliances
<input type="checkbox"/> 123	0

Remove Selected Groups

Add Group:

Group Name:

Add Group

Save Reset

3. Click the name of the group you want to edit in the Appliance Group list. The Local Setup: Group: *Appliance Group* page appears.

Figure 3-22. Local Setup: Group: *Appliance Group* Page

Home | Local Setup | Appliance Setup | Reports | System Log | Help

Logged in as: admin (logout)

Local Setup

- Networking
- Alarms
- Logging
- Date & Time
- Accounts
- Appliances
- **Groups** «
- Polling
- Home Page
- Configuration Manager
- Upgrade Software
- Update Licenses
- Reboot
- Shutdown

Group: 123

The following is the list of appliances in the 123 group.

Appliance	Model	Health	Version
No appliances.			

Remove Selected Appliances

Register & Add New Appliance:

Appliance Hostname/IP:

Username:

Password:

Register & Add New Appliance

Add Appliance: 169.254.169.254

Add Appliances From:

Save Reset

4. Under **Register & Add New HP EFS WAN Accelerator**, type the appliance host name or IP address in the **Appliance Hostname/IP** text box to register and add an HP EFS WAN Accelerator to the appliance group.
5. Type the user name of the remote administrator user in the **Username** text box. This is the login the administrator must use to make configuration changes on the remote HP EFS WAN Accelerator. For example, you might have the same login and password for all remote HP EFS WAN Accelerators in an appliance group to ensure security.
6. Type the password for the remote user in the **Password** text box. This is the password the administrator must use to make configuration changes on the remote HP EFS WAN Accelerator. For example, you might have the same login and password for all remote HP EFS WAN Accelerators in an appliance group to ensure security.
7. Click **Register & Add New Appliance** to register the HP EFS WAN Accelerator in the system.
8. To add an HP EFS WAN Accelerator that is already registered to the group, select an HP EFS WAN Accelerator from the **Add Appliance** drop-down list and click **Add**.
9. To add a group of appliances to this group, select a group from the **Add Appliances From** drop-down list and click **Add**.
10. Click **Apply** to apply your settings to the running configuration. (Apply your settings to test a new configuration before committing it memory.)
11. Click **Save** to write your settings to memory or click **Reset** to return the settings to their previous values.

TIP: To change the configuration settings on a remote HP EFS WAN Accelerator in the group, click the name of the appliance in the Group list.

Setting the HP EFS WAN Accelerator Manager Polling Interval

The following section describes how to set the polling interval for the HP EFS WAN Accelerator Manager.

Setting the Polling Interval

You set the polling interval for HP StorageWorks Enterprise File Services WAN Accelerator Manager in the Local Setup: Polling page. The polling interval sets how often the HP EFS WAN Accelerator Manager gathers information about the HP system. The default value is 5 minutes.

To set the polling interval

1. Click the Local Setup tab to display the Local Setup: Networking Name & Interfaces page.
2. Click Polling in the left menu to display the Local Setup: Polling page.

Figure 3-23. Local Setup: Polling Page

The screenshot shows the HP EFS WAN Accelerator Manager interface. At the top, there is a navigation bar with tabs: Home, Local Setup, Appliance Setup, Reports, System Log, and Help. The 'Local Setup' tab is selected. On the right side of the navigation bar, it says 'Logged in as: admin (logout)'. On the left, there is a sidebar menu with the following items: Local Setup (expanded), Networking, Alarms, Logging, Date & Time, Accounts, Appliances, Groups, Polling (selected), Home Page, Configuration Manager, Upgrade Software, Update Licenses, Reboot, and Shutdown. The main content area is titled 'Polling' and contains a description: 'Check and modify how often appliances are polled for status information.' Below this, there is a section for 'Polling Interval' with a text box containing '5' and the unit 'minutes'. Another section, 'Additional Settings (Optional)', has a text box for 'Number of Concurrent Polling Processes' containing '8' and a range '(1-16)'. At the bottom right, there are three buttons: 'Apply', 'Save', and 'Reset'.

3. Under Polling Interval, type the time interval in the **Interval** text box to set how often the system gathers status information. The default is 5 minutes.
4. Optionally, under Additional Settings, type a number in the **Concurrent Polling Processes** text box to limit the number of concurrent processes for each interval.
5. Click **Apply** to apply your settings to the running configuration. (Apply your settings to test a new configuration before committing it memory.)
6. Click **Save** to write your settings to memory or click **Reset** to return the settings to their previous values.

Modifying the HP EFS WAN Accelerator Manager Home Page

The following section describes how to set the attributes for groups in the HP EFS WAN Accelerator Manager.

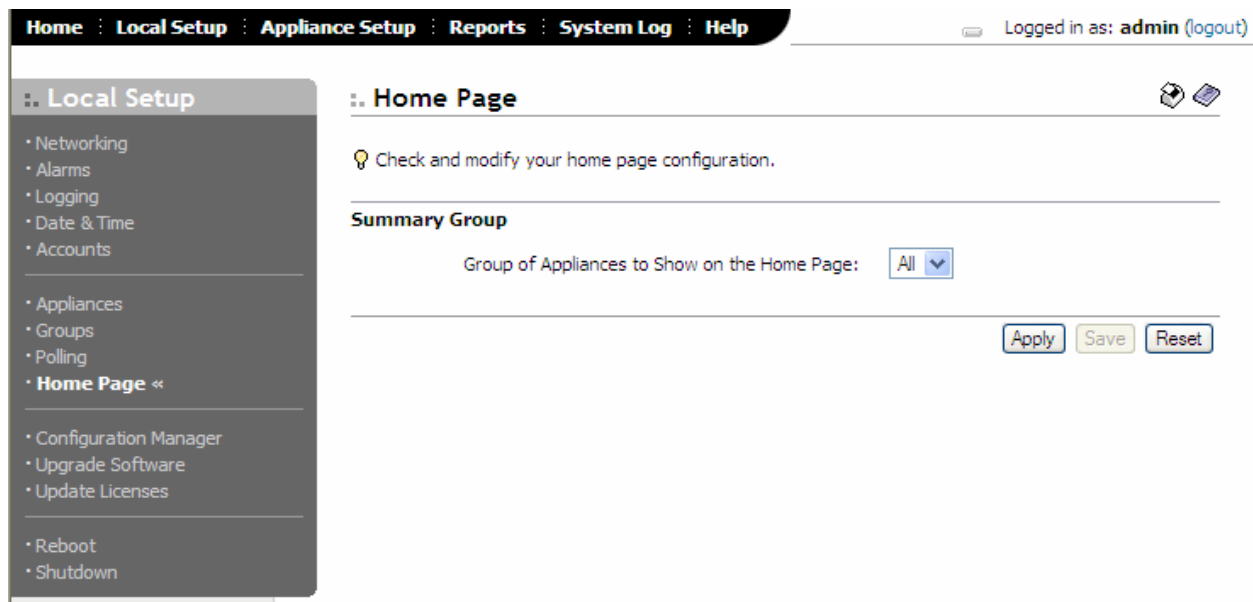
Setting HP EFS WAN Accelerator Manager Home Page Attributes

To set home page groups

You set HP EFS WAN Accelerator Manager Home: Welcome page attributes for the appliance groups in the Local Setup: Home Page page.

1. Click the Local Setup tab to display the Local Setup: Networking Name & Interfaces page.
2. Click Home Page in the left menu to display the Local Setup: Home Page page.

Figure 3-24. Local Setup: Home Page



3. Under Summary Group, select a group from the **Group of Appliances to Show on the Home Page** drop-down list.
4. Click **Apply** to apply your settings to the running configuration. (Apply your settings to test a new configuration before committing it memory.)
5. Click **Save** to write your settings to memory or click **Reset** to return the settings to their previous values.

Managing HP EFS WAN Accelerator Manager Configurations

The following section describes how to save and activate a configuration for the HP StorageWorks Enterprise File Services WAN Accelerator Manager. After you have finished the configuration process you must write your settings to memory.

Writing HP EFS WAN Accelerator Manager Configurations to Memory

Each HP StorageWorks Enterprise File Services WAN Accelerator Manager has an active, running configuration and written, saved configurations. You can save your settings on each individual page of the HP EFS WAN Accelerator Manager or you can apply your settings to make sure that the values you set are correct before you save the configuration.

When you **Apply** your settings in the HP EFS WAN Accelerator Manager the values are applied to the current running configuration—it does not write the settings to memory. When you **Save** your configuration settings, the values are written to memory and take effect after you restart the HP EFS WAN Accelerator service.

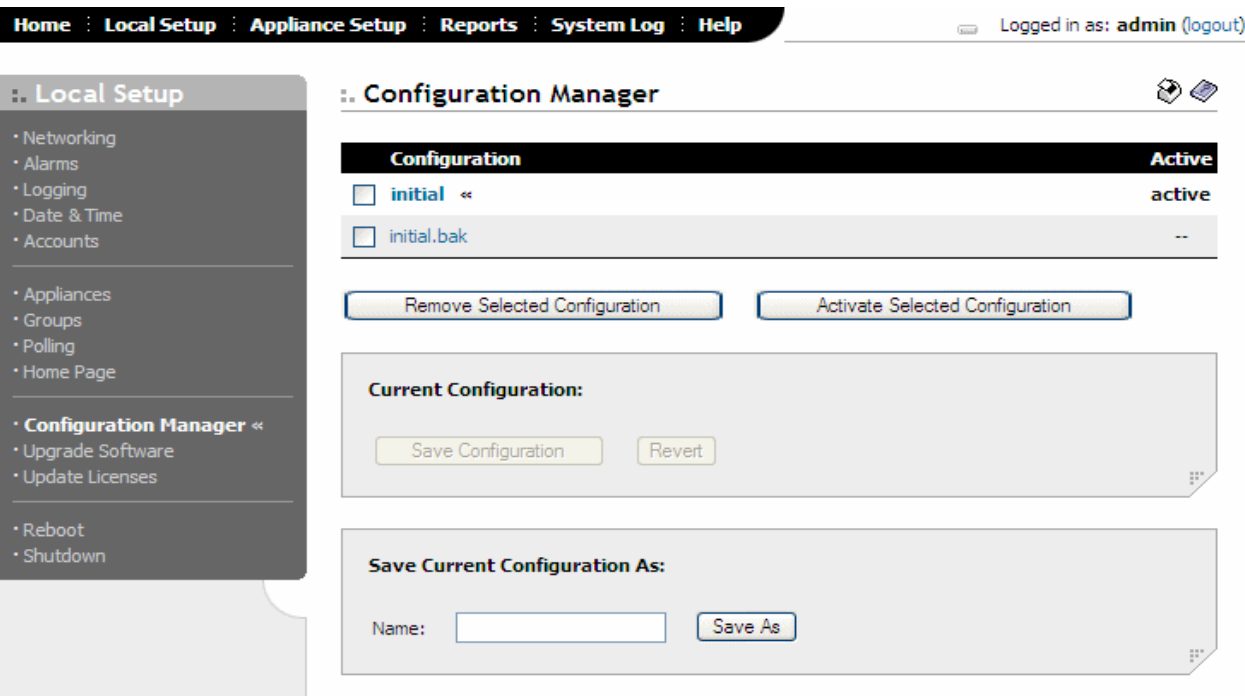
Each time you save your configuration settings, they are written to the current running configuration, and a backup is created. For example, if the running configuration is **myconfig** and you save it, **myconfig** is backed up to **myconfig.bak** and **myconfig** is overwritten with the current configuration settings.

TIP: If you have not saved your settings, the **Save Configuration** icon displays a flashing orange arrow on the left side of the page.

To write configuration settings to memory

1. Click the Local Setup tab to display the Local Setup: Networking, Name & Interfaces page.
2. Click Configuration Manager in the left menu to display the Local Setup: Configuration Manager page.

Figure 3-25. Local Setup: Configuration Manager Page



3. Click **Save Configuration** to write the configuration to memory or **Revert** to revert to the running configuration.

TIP: To save the configuration with a new name, under Save Current Configuration As, type a new name in the **Name** text box and click **Save As**.

TIP: To remove a configuration, click the check box next to the name and click **Remove Selected Configuration**. Click **Save Configuration** to write your settings to memory or click **Revert** to return your settings to their previous values.

Activating Configurations

To activate a configuration

You can activate a previous configuration. When you activate a configuration it becomes the current, running configuration.

1. Click the Local Setup tab to display the Local Setup: Networking, Name & Interfaces page.
2. Click Configuration Manager in the left menu to display the Local Setup: Configuration Manager page.

Figure 3-26. Local Setup: Configuration Manager Page

The screenshot shows the 'Local Setup: Configuration Manager' page. At the top, there is a navigation bar with tabs: Home, Local Setup, Appliance Setup, Reports, System Log, and Help. The 'Local Setup' tab is active. On the left, a sidebar menu lists various options, with 'Configuration Manager' highlighted. The main content area is titled 'Configuration Manager' and contains a table with the following data:

Configuration	Active
<input type="checkbox"/> initial <<	active
<input type="checkbox"/> initial.bak	--

Below the table, there are two buttons: 'Remove Selected Configuration' and 'Activate Selected Configuration'. Further down, there is a section titled 'Current Configuration:' with two buttons: 'Save Configuration' and 'Revert'. At the bottom, there is a section titled 'Save Current Configuration As:' with a text box labeled 'Name:' and a 'Save As' button.

3. In the Configuration list, click the check box next to the configuration you want to activate.
4. Click **Activate Selected Configuration** to activate the configuration. When you activate a configuration, the settings in that configuration file become the running configuration.
5. Click **Save Configuration** to write the new configuration to memory or click **Revert** to revert to the running configuration.

TIP: To remove a configuration, in the Configuration list, click the check box next to the name of the configuration you want to delete and click **Remove Selected Configuration**.

TIP: To revert to the running configuration, click **Revert**.

Upgrading Your HP EFS WAN Accelerator Manager Software

The following section describes how to upgrade to a new version of the HP StorageWorks Enterprise File Services WAN Accelerator Manager software and how to revert to a previous version of the HP StorageWorks Enterprise File Services WAN Accelerator Manager software.

Upgrading Your HP EFS WAN Accelerator Manager Software

You can upgrade the HP StorageWorks Enterprise File Services WAN Accelerator Manager software from a Uniform Resource Locator (URL) or from a local file in the Local Setup: Software Upgrade page. You can also revert to a previous version of the software.

NOTE: HTTP (Hyper Text Transfer Protocol) and File Transfer Protocol (FTP) URLs are valid.

To upgrade your software

1. Click the Local Setup tab to display the Local Setup: Networking, Name & Interfaces page.
2. Click Upgrade Software in the left menu to display the Local Setup: Software Upgrade page.

Figure 3-27. Local Setup: Software Upgrade Page

The screenshot displays the 'Local Setup: Software Upgrade' page. At the top, there is a navigation bar with tabs: Home, Local Setup (selected), Appliance Setup, Reports, System Log, and Help. A user is logged in as 'admin' with a 'logout' link. On the left, a sidebar menu lists various setup options, with 'Upgrade Software' highlighted. The main content area shows the current 'Booted Version' and 'Backup Version' of the software, both being 'rbtcmcmc/linux Siberia #0 2005-01-07 13:42:19 root@gilman:CVS_TMS/HEAD'. A 'Switch Version' button is available. Below this, the 'Install Software' section offers two methods: 'Install From URL' (selected) and 'Install From Local File'. The 'Install From Local File' option includes a 'Browse...' button. An 'Install Image' button is at the bottom of the installation section.

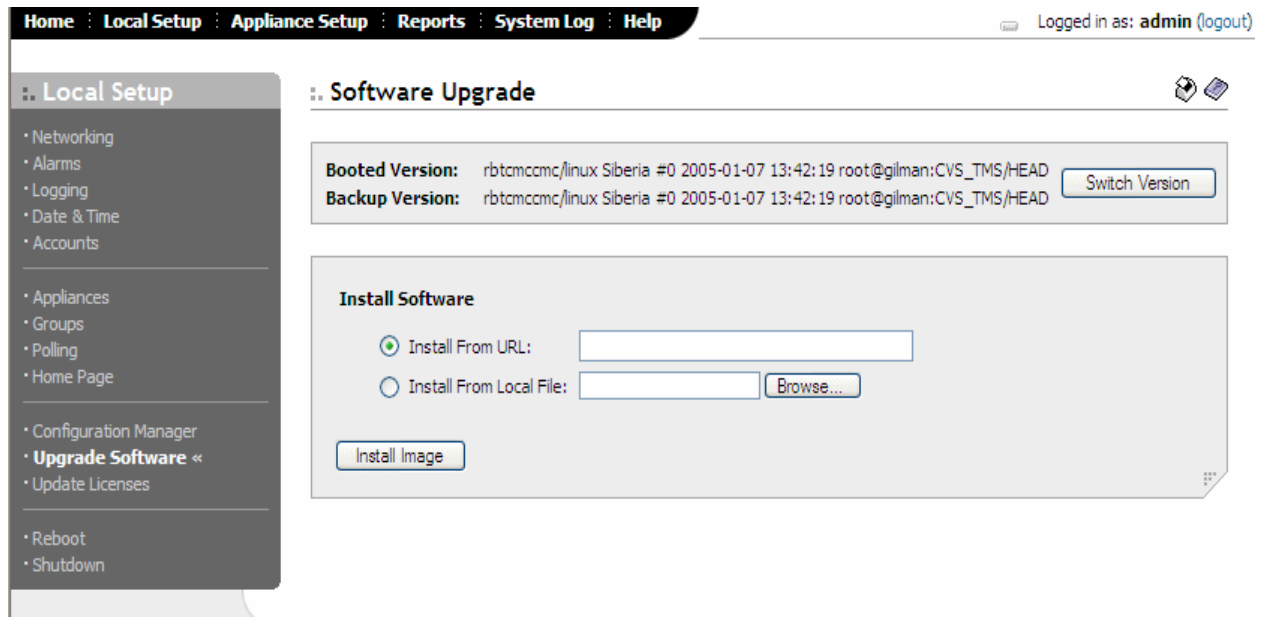
3. Under Install Software, choose a method for installing the new software:
 - ◆ Click **Install from a URL** and type the URL in the text box to install the software from a URL.
 - ◆ Click **Install From Local File** and type the path to install from a file on a Web browser machine. (To browse to the local file directory, click **Browse.**)
4. Click **Install Image** to install the new version of the software.

You can revert to a previous version of the software. The previous version of the software is displayed in the Local Setup: Software Upgrade page.

To revert to a previous version of the software

1. Click the Local Setup tab to display the Local Setup: Networking, Name & Interfaces page.
2. Click Upgrade Software in the left menu to display the Local Setup: Software Upgrade page.

Figure 3-28. Local Setup: Software Upgrade Page



3. In the Software Upgrade section, click **Switch Version** next to the software version that you want to install. The previous version of the software is installed.

Updating Your HP EFS WAN Accelerator Manager Licenses

The following section describes how to update your HP EFS WAN Accelerator Manager licenses.

Updating Your HP EFS WAN Accelerator Manager Licenses

You can view a list of active licenses, update expired licenses, and add new license keys in the Local Setup: Update License page.

If you enter multiple license keys, they must be separated by space, tab, or RETURN.

To update a license

1. Click the Local Setup tab to display the Local Setup: Networking, Name & Interfaces page.
2. Click Update Licenses in the left menu to display the Local Setup: Update License page.

Figure 3-29. Local Setup: Update License Page

Home Local Setup Appliance Setup Reports System Log Help Logged in as: admin (logout)

Local Setup

- Networking
- Alarms
- Logging
- Date & Time
- Accounts
- Appliances
- Groups
- Polling
- Home Page
- Configuration Manager
- Upgrade Software
- **Update Licenses «**
- Reboot
- Shutdown

Update License

The following is a list of all the installed licenses.

License	Key	Valid
<input type="checkbox"/> Base Software	LK1-CMC10BASE-0000-0000-1-B658-5D0E-D6B9	Valid
<input type="checkbox"/> Max 25 Appliances	LK1-CMC10S0025-0000-0000-1-5584-EFD1-CFB2	Valid

Remove Selected Licenses

Add New License(s):

Enter or paste the license keys into the text area below.

Add License(s)

Save Reset

3. Copy and paste the license key in the **Add New License(s)** text box.
4. Click **Add License(s)** to add the license key to the running configuration.
5. Click **Save** to write the new license to memory or click **Reset** to return the settings to their previous values.

TIP: To remove a license, click the check box next to the name and click **Remove Selected Licenses**. Click **Save** to write your settings to memory or click **Reset** to return your settings to their previous values.

Rebooting the HP EFS WAN Accelerator Manager

The following section describes how to reboot the HP StorageWorks Enterprise File Services WAN Accelerator Manager.

Rebooting the HP EFS WAN Accelerator Manager

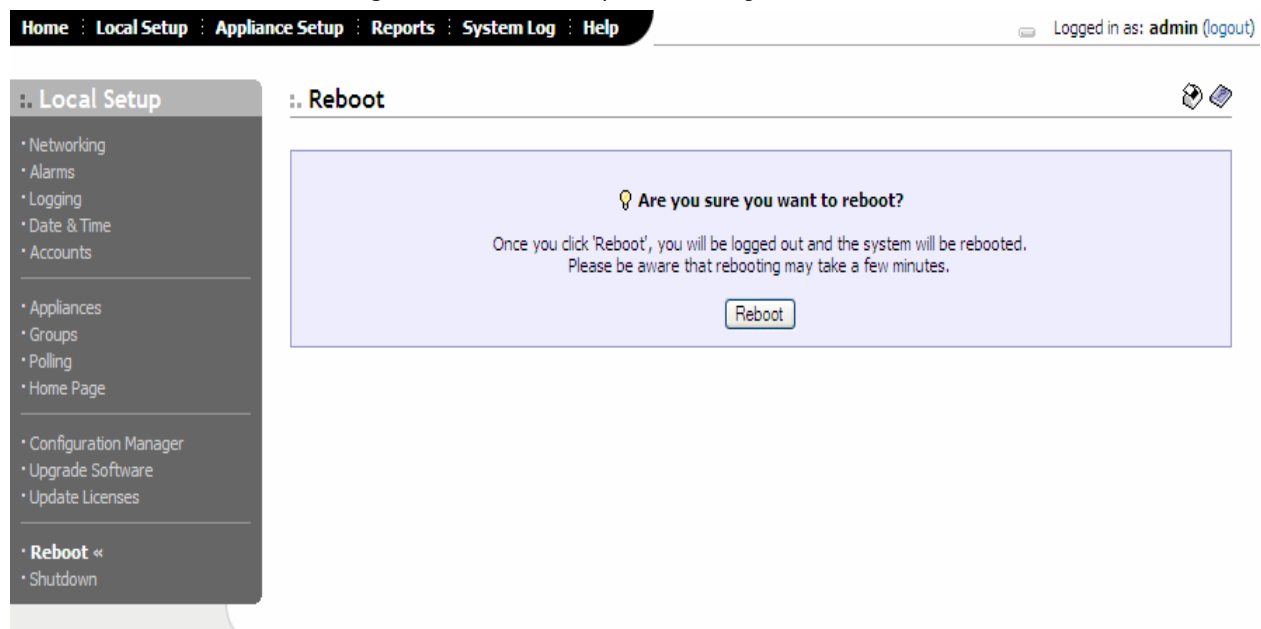
To reboot the HP EFS WAN Accelerator Manager

You reboot the HP EFS WAN Accelerator Manager in the Local Setup: Reboot page.

Rebooting the HP StorageWorks Enterprise File Services WAN Accelerator Manager disrupts existing network connections that are currently proxied through the appliance. Rebooting can take a few minutes.

1. Click the Local Setup tab to display the Local Setup: Networking, Name & Interfaces page.
2. Click Reboot to display the Local Setup: Reboot page.

Figure 3-30. Local Setup: Reboot Page



3. Click **Reboot**. After you click **Reboot**, you are logged out of the system and it is rebooted.

Shutting Down the HP EFS WAN Accelerator Manager

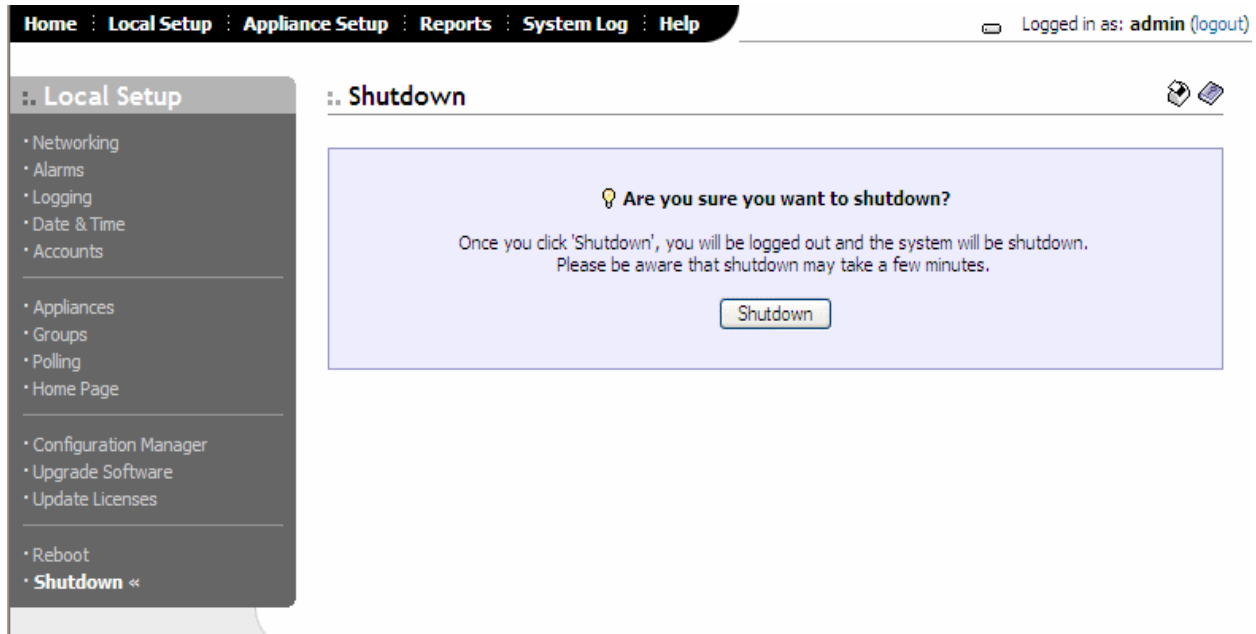
You shutdown the HP StorageWorks Enterprise File Services WAN Accelerator Manager in the Local Setup: Shutdown page. When you shutdown the HP StorageWorks Enterprise File Services WAN Accelerator Manager, connections are broken and optimization ceases. Shutdown can take a few minutes.

To restart the system you must manually turn on the HP StorageWorks Enterprise File Services WAN Accelerator Manager.

To shutdown the HP StorageWorks Enterprise File Services WAN Accelerator Manager

1. Click the Local Setup tab to display the Local Setup: Networking, Name & Interfaces page.
2. Click Shutdown to display the Local Setup: Shutdown page.

Figure 3-31. Local Setup: Shutdown Page



3. Click **Shutdown**. After you click **Shutdown**, the system is turned off. To restart the system you must manually turn on the HP EFS WAN Accelerator.

Configuring Service Settings for Appliance Groups

The following section describes how to configure services for the groups of registered HP EFS WAN Accelerators in your HP system. It contains the following sections:

- ◆ [“Enabling Service Parameters for Appliance Groups,”](#) next
- ◆ [“Setting In-Path Rules for Appliance Groups”](#) on page 91

If you have a large deployment of HP EFS WAN Accelerators, the HP EFS WAN Accelerator Manager provides you with the ability to do *batch configuration* changes. A batch configuration is a set of configuration settings that are sent out at the same time through the HP EFS WAN Accelerator Manager and applied to the appliance group as a whole.

This section assumes that you have performed an initial configuration for each of the HP EFS WAN Accelerators in your HP system. For detailed information about configuring HP EFS WAN Accelerators, see the *HP StorageWorks Enterprise File Services WAN Accelerator Installation and Configuration Guide* and the *HP StorageWorks Enterprise File Services WAN Accelerator Management Console User's Guide*.

This section also assumes that you have registered each HP EFS WAN Accelerator in your system and you have created and added your HP EFS WAN Accelerators to an appliance group. For detailed information about registering HP EFS WAN Accelerators and creating and adding HP EFS WAN Accelerators to groups, see [“Registering HP EFS WAN Accelerators” on page 64](#) and [“Creating HP EFS WAN Accelerator Groups” on page 68](#).

Enabling Service Parameters for Appliance Groups

You set the following base service configuration parameters for a group of HP EFS WAN Accelerators in the Appliance Setup: Service, Configuration page:

- ◆ [“Enabling In-Path Support for Appliance Groups,”](#) next
- ◆ [“Enabling Out-of-Path Support for Appliance Groups” on page 85](#)
- ◆ [“Enabling Authentication for Appliance Groups” on page 87](#)
- ◆ [“Enabling Failover Support for Appliance Groups” on page 89](#)

Enabling In-Path Support for Appliance Groups

During the initial setup of the HP EFS WAN Accelerators in your HP system, you had the option to enable and configure in-path support. Check or modify your settings in the Appliance Setup: Service, Configuration page.

In-path support is for network configurations where the HP EFS WAN Accelerator is in the direct path between the server, the WAN, and the client. In-path support is transparent: the client and server are unaware of the HP EFS WAN Accelerator. For detailed information about in-path configurations, see the *HP StorageWorks Enterprise File Services WAN Accelerator Installation and Configuration Guide*.

When you configure in-path support, you have the following options:

- ◆ **Enable External Traffic Redirection (Layer 4, PBR, WCCP).** You enable external traffic redirection if you are using a Layer-4 switch to direct traffic to the WAN, Policy Based Routing (PBR), or Web Cache Communication Protocol (WCCP):
 - ◆ **Layer 4 Switch.** You enable Layer 4 switch support when you have multiple HP EFS WAN Accelerators in your network to manage large bandwidth requirements. For detailed information, see the *HP StorageWorks Enterprise File Services WAN Accelerator Installation and Configuration Guide*.

- ◆ **WCCP.** If your network design requires you to configure the HP EFS WAN Accelerator as an out-of-path device, you can use WCCP to configure the HP EFS WAN Accelerator out-of-path, yet redirect traffic through it to ensure it is optimized. For detailed information about WCCP deployments, see the *HP StorageWorks Enterprise File Services WAN Accelerator Installation and Configuration Guide* and the *HP StorageWorks Enterprise File Services WAN Accelerator Command-Line Interface Reference Manual*.
- ◆ **PBR.** Policy-Based routing (PBR) allows you to define policies to route packets instead of relying on routing protocols. You enable PBR to redirect traffic that you want to optimize to an HP EFS WAN Accelerator that is configured as an out-of-path device. For detailed information about PBR deployments, see the *HP StorageWorks Enterprise File Services WAN Accelerator Installation and Configuration Guide* and the *HP StorageWorks Enterprise File Services WAN Accelerator Command-Line Interface Reference Manual*.
- ◆ **Reset Existing Client Connections with Start Up.** If you enable the *kickoff* feature, connections that exist when the HP EFS WAN Accelerator service is started and restarted are disconnected. When the connections are retried they are optimized.

Generally, connections are short lived and kickoff is not necessary. It is suitable for very challenging remote environments. For example, in an environment with 128 kbps and 1.5 ms of latency, you might want to abort an HTTP download so that your traffic is optimized, whereas in a remote branch office with a T1 and 35 ms round-trip time, you would want only new connections optimized and would not abort the old ones.

NOTE: Do not enable kickoff for in-path HP EFS WAN Accelerators that use auto-discovery and if you do not have an HP EFS WAN Accelerator on the remote side of the network.

- ◆ **Pass Through Traffic for Known Secure Ports.** Automatically pass through traffic on commonly secure ports (for example, **ssh**, **https**, and **smtps**). For a list of ports that are automatically forwarded, see [Appendix B, "HP System Ports."](#)
- ◆ **Pass Through Traffic for Known Interactive Ports.** Automatically pass through traffic on interactive ports (for example, Telnet, TCP ECHO, remote logging, and shell). For a list of interactive ports that are automatically forwarded, see [Appendix B, "HP System Ports."](#)

To enable in-path support

1. Click the Appliance Setup tab to display the Appliance Setup: Service, Configuration page.

Figure 3-32. Appliance Setup: Service, Configuration Page

The screenshot displays the 'Appliance Setup: Service, Configuration Page' in a web interface. The top navigation bar includes links for Home, Local Setup, Appliance Setup, Reports, System Log, and Help. The user is logged in as 'admin' with a 'logout' link. A left sidebar shows the 'Appliance Setup' menu with options like Service, Alarms, Logging, Upgrade Software, Start/Stop Service, Reboot Appliance, and Send CLI Command. The main content area is titled 'Service' and has two tabs: 'Configuration' (selected) and 'Rules'. A lightbulb icon indicates a configuration instruction: 'Configure the base service settings that should be pushed to the selected group of appliances.' Below this, the 'Appliance Group' is set to 'All' with a dropdown arrow, and a checkbox 'Backup existing configuration first.' is checked. The 'In-Path' section has a checkbox 'Enable In-Path Support' which is unchecked. Under 'Options:', there are four checkboxes: 'Enable External Traffic Redirection Support (Layer4/PBR/WCCP)' (unchecked), 'Reset Existing Client Connections on Start Up' (unchecked), 'Automatically Pass Through Traffic for Known Secure Ports' (checked), and 'Automatically Pass Through Traffic for Known Interactive Ports' (checked). The 'Out-of-Path' section has a checkbox 'Enable Out-of-Path Support' which is unchecked, and a 'Local Port' field set to '7810'. The 'Authentication (Optional)' section has a checkbox 'Enable Authentication' which is unchecked, and fields for 'Client Secret' and 'Server Secret'. The 'Failover (Optional - Requires Additional Appliance)' section has a checkbox 'Enable Failover Support' which is unchecked, a 'Mode' dropdown set to 'Backup', and a 'Buddy IP Address' field. At the bottom right, there are 'Send Changes' and 'Reset' buttons.

Home Local Setup Appliance Setup Reports System Log Help Logged in as: admin (logout)

Appliance Setup

- Service «
- Alarms
- Logging
- Upgrade Software
- Start/Stop Service
- Reboot Appliance
- Send CLI Command

Service

Configuration Rules

Configure the base service settings that should be pushed to the selected group of appliances.

Appliance Group: All Backup existing configuration first.

In-Path

☐ Enable In-Path Support

Options:

- ☐ Enable External Traffic Redirection Support (Layer4/PBR/WCCP)
- ☐ Reset Existing Client Connections on Start Up
- ☒ Automatically Pass Through Traffic for Known Secure Ports
- ☒ Automatically Pass Through Traffic for Known Interactive Ports

Out-of-Path

☐ Enable Out-of-Path Support

Local Port: 7810

Authentication (Optional)

☐ Enable Authentication

Client Secret:

Server Secret:

Failover (Optional - Requires Additional Appliance)

☐ Enable Failover Support

Mode: Backup

Buddy IP Address:

Send Changes Reset

2. Select an appliance group from the **Appliance Group** drop-down list.
3. Click **Backup Existing Configuration First** to save your current, running configuration settings for the appliance group.
4. Under In-Path, click **Enable In-Path Support** to enable optimization on traffic that is in the direct path of the client, server, and HP EFS WAN Accelerator.
5. Under options, click **Enable External Traffic Redirection Support (Layer 4, PBR, WCCP)** if you are using a Layer 4 switch, PBR, or WCCP to redirect traffic.
6. Click **Reset Existing Client Connections with Start Up** to enable optimization on your client connections each time you log in. Generally, connections are short lived and this setting is not necessary. Set kickoff if you have a very challenging remote environment.
7. Click **Send Changes** to write your settings to memory or click **Reset** to return the settings to their previous values.

Enabling Out-of-Path Support for Appliance Groups

Optionally, you can enable out-of-path support for a group of HP EFS WAN Accelerators in the Appliance Setup: Service, Configuration page.

An out-of-path configuration is when the HP EFS WAN Accelerator is not in the direct path between the client and the server. For example, an out-of-path configuration is suitable for data centers because applications connect to servers at this site. Some data centers might not be suitable for out-of-path configurations because of applications that connect from the data center such as backup applications.

For detailed information about out-of-path configurations, see the *HP StorageWorks Enterprise File Services WAN Accelerator Installation and Configuration Guide*.

NOTE: If you have an out-of-path configuration with failover support, you need to specify the master and backup HP EFS WAN Accelerators in the Appliance Setup: Service, Rules, Fixed-Target page. For detailed information, see [“Setting In-Path Rules for Appliance Groups” on page 91](#).

To enable out-of path support

1. Click the Appliance Setup tab to display the Appliance Setup: Service, Configuration page.

Figure 3-33. Appliance Setup: Service, Configuration Page

HomeLocal SetupAppliance SetupReportsSystem LogHelp

Logged in as: admin (logout)

Appliance Setup

Service «

Alarms

Logging

Upgrade Software

Start/Stop Service

Reboot Appliance

Send CLI Command

Service

ConfigurationRules

Configure the base service settings that should be pushed to the selected group of appliances.

Appliance Group: AllBackup existing configuration first.

In-Path

Enable In-Path Support

Options:

Enable External Traffic Redirection Support (Layer4/PBR/WCCP)

Reset Existing Client Connections on Start Up

Automatically Pass Through Traffic for Known Secure Ports

Automatically Pass Through Traffic for Known Interactive Ports

Out-of-Path

Enable Out-of-Path Support

Local Port: 7810

Authentication (Optional)

Enable Authentication

Client Secret:

Server Secret:

Failover (Optional - Requires Additional Appliance)

Enable Failover Support

Mode: Backup

Buddy IP Address:

Send Changes

Reset

2. Select an appliance group from the **Appliance Group** drop-down list.
3. Click **Backup Existing Configuration First** to save your current, running configuration settings for the appliance group.
4. Under Out-of-Path, click **Enable Out-of-Path Support** and type a port number in the **Local Port** text box.
5. Click **Send Changes** to write your settings to memory or click **Reset** to return the settings to their previous values.

Enabling Authentication for Appliance Groups

Optionally, you can configure authentication for HP EFS WAN Accelerators to ensure that connections between appliances are secure. The HP EFS WAN Accelerators use shared secrets to form responses to authentication challenges. The secrets are strings of data that HP EFS WAN Accelerators on both sides of the network share, but do not actually transfer over the network.

You specify the following types of secrets:

- ◆ **Client Secret (Secret1).** Authenticates peers that are connected to your HP EFS WAN Accelerator.
- ◆ **Server Secret (Secret2).** Authenticates peers that your HP EFS WAN Accelerator is connected to.

You can define secrets to be the same on all participating HP EFS WAN Accelerators and enable them for the peers that you want to authenticate:

- ◆ app1: secret1 (client) = foo, secret2 (server) = bar, enable = false
- ◆ app2: secret1 (client) = foo, secret2 (server) = bar, enable = true
- ◆ app3: secret1 (client) = foo, secret2 (server) = bar, enable = true

NOTE: You cannot enable authentication if either of the secrets are blank.

For optimum security, the secrets must be at least 16 bytes, although this is not necessary for operation. The two secrets can be identical, but this decreases security.

Secrets must be shared on both sides of the system. For example, suppose you need to authenticate on the server-side HP EFS WAN Accelerator, but you do not need to on the client-side HP EFS WAN Accelerator. You must enable authentication and specify secrets on the server-side HP EFS WAN Accelerator. On the client-side HP EFS WAN Accelerator, you do not enable authentication, but you do specify the secrets.

To set appliance authentication

1. Click the Appliance Setup tab to display the Appliance Setup: Service, Configuration page.

Figure 3-34. Appliance Setup: Service, Configuration Page

[Home](#) | [Local Setup](#) | [Appliance Setup](#) | [Reports](#) | [System Log](#) | [Help](#)

Logged in as: **admin** ([logout](#))

Appliance Setup

Service «

Alarms

Logging

Upgrade Software

Start/Stop Service

Reboot Appliance

Send CLI Command

Service

ConfigurationRules

Configure the base service settings that should be pushed to the selected group of appliances.

Appliance Group: AllBackup existing configuration first.

In-Path

Enable In-Path Support

Options:

Enable External Traffic Redirection Support (Layer 4/PBR/WCCP)

Reset Existing Client Connections on Start Up

Automatically Pass Through Traffic for Known Secure Ports

Automatically Pass Through Traffic for Known Interactive Ports

Out-of-Path

Enable Out-of-Path Support

Local Port: 7810

Authentication (Optional)

Enable Authentication

Client Secret:

Server Secret:

Failover (Optional - Requires Additional Appliance)

Enable Failover Support

Mode: Backup

Buddy IP Address:

Send ChangesReset

2. Select an appliance group from the **Appliance Group** drop-down list.
3. Click **Backup Existing Configuration First** to save your current, running configuration settings for the appliance group.
4. Click **Enable Authentication** to enable client and server authentication of users. (If you only need to share secrets between two HP EFS WAN Accelerator, do not click **Enable Authentication**.)
5. Type a client-side secret in the **Client Secret** text box.
6. Type a server-side secret in the **Server Secret** text box.
7. Click **Send Changes** to write your settings to memory or click **Reset** to return the settings to their previous values.

Enabling Failover Support for Appliance Groups

Optionally, you can set failover support for a group of HP EFS WAN Accelerators in the Setup: Service, Configuration page. Failover support ensures continued optimization if there is a failure with one of the HP EFS WAN Accelerators. If the *master* HP EFS WAN Accelerator fails, the traffic is automatically processed by the *backup* HP EFS WAN Accelerator using the *buddy* IP address.

NOTE: If you have an out-of-path configuration with failover support, you need to specify the master and backup HP EFS WAN Accelerators in the Appliance Setup: Service, In-Path Rules, Fixed-Target page. For detailed information, see [“Setting In-Path Rules for Appliance Groups” on page 91](#).

To set the failover appliance

1. Click the Appliance Setup tab to display the Appliance Setup: Service, Configuration page.

Figure 3-35. Appliance Setup: Service, Configuration Page

[Home](#)
[Local Setup](#)
[Appliance Setup](#)
[Reports](#)
[System Log](#)
[Help](#)

Appliance Setup

- Service «
- Alarms
- Logging

- Upgrade Software
- Start/Stop Service
- Reboot Appliance

- Send CLI Command

Service

Configuration

Rules

Configure the base service settings that should be pushed to the selected group of appliances.

Appliance Group:
All
☒ Backup existing configuration first.

In-Path

☐ Enable In-Path Support

Options:

☐ Enable External Traffic Redirection Support (Layer4/PBR/WCCP)
☐ Reset Existing Client Connections on Start Up
☒ Automatically Pass Through Traffic for Known Secure Ports
☒ Automatically Pass Through Traffic for Known Interactive Ports

Out-of-Path

☐ Enable Out-of-Path Support

Local Port:
7810

Authentication (Optional)

☐ Enable Authentication

Client Secret:
Server Secret:

Failover (Optional - Requires Additional Appliance)

☐ Enable Failover Support

Mode:
Backup
Buddy IP Address:

Send Changes

Reset

2. Select an appliance group from the **Appliance Group** drop-down list.
3. Click **Backup Existing Configuration First** to save your current, running configuration settings for the appliance group.
4. Under Failover, click **Enable Failover Support** to enable a failover HP EFS WAN Accelerator.
5. Select **Master** or **Backup** from the **Mode** drop-down list. A master appliance is the primary HP EFS WAN Accelerator; the backup appliance is the HP EFS WAN Accelerator that automatically forwards traffic if the master appliance fails.
6. Type the IP address for the master or backup HP EFS WAN Accelerator in the **Buddy IP Address** text box.
7. Click **Send Changes** to write your settings to memory or click **Reset** to return the settings to their previous values.

Setting In-Path Rules for Appliance Groups

You set in-path configuration rules in the Setup: Service, In-Path Rules page. An in-path rule defines the policies for intercepting traffic for optimization. By default, the HP EFS WAN Accelerator automatically intercepts and optimizes traffic on all IP addresses (0.0.0.0) and ports (all). Defining in-path rules modifies the default setting. You can have the following in-path rules:

- ◆ **Auto-Discovery.** Auto-discovery rules automatically find the HP EFS WAN Accelerators between this appliance and the server for which the packet is destined. For detailed information about in-path configurations, see the *HP StorageWorks Enterprise File Services WAN Accelerator Installation and Configuration Guide*.

NOTE: By default, the HP EFS WAN Accelerator automatically intercepts and optimizes traffic on all IP addresses and ports.

- ◆ **Fixed Target.** Fixed target rules directly specify out-of-path HP EFS WAN Accelerators near the target server. Determine which servers you would like a particular HP EFS WAN Accelerator to optimize (and, optionally, which ports), and add rules to specify the network of servers, ports, and out-of-path HP EFS WAN Accelerators to use. For detailed information about out-of-path configurations, see the *HP StorageWorks Enterprise File Services WAN Accelerator Installation and Configuration Guide*.

(If you have an out-of-path configuration with failover support, you specify the master and backup HP EFS WAN Accelerators in the Setup: Service, In-Path Rules page.)

- ◆ **Pass Through.** Pass through rules identify traffic that is passed through the network unoptimized.

The HP EFS WAN Accelerator applies rules in numerical order starting with rule 1. If the conditions set in the rule match, then the rule is applied, and the system moves on to the next packet. If the conditions set in the rule do not match, the system consults the next rule. For example, if the conditions of rule 1 do not match, rule 2 is consulted. If rule 2 matches the conditions, it is applied, and no further rules are consulted.

It is important to plan your in-path rules so that your network conditions are met. Typically, most rules are listed in the following order:

1. **Pass through.** List the exceptions to optimization first.
2. **Fixed target.** List any fixed targets next.
3. **Auto-discovery.** Apply the default rule: optimize all remaining traffic. (The default auto-discovery rule is listed automatically.)

You can also automatically forward traffic on secure and interactive ports in the Setup: Service In-Path Rules page:

To set an in-path, auto-discovery rule

1. Click the Appliance Setup tab to display the Appliance Setup: Service, Configuration page.
2. Click the Rules tab to display the Appliance Setup: Service, Rules, Auto-Discovery page.

Figure 3-36. Appliance Setup: Service, Rules, Auto-Discovery Page

Home | Local Setup | Appliance Setup | Reports | System Log | Help

Logged in as: admin (logout)

Appliance Setup

- Service «
- Alarms
- Logging
- Upgrade Software
- Start/Stop Service
- Reboot Appliance
- Send CLI Command

Service

Configuration | Rules

Configure the in-path rules that should be pushed to the selected group of appliances.

Appliance Group: All ☐ Backup existing configuration first.

#	Action	Source	Destination	Port	Target	Port
def	Auto Discover	all	all	all	--	--

Remove Selected Rules

Add New Rule: Auto Discover | Fixed Target | Pass Through

Auto-discover rules find in-path appliances on the remote side of your network.

Insert Rule Before: end

Source Subnet: 0.0.0.0/0

Destination Subnet: 0.0.0.0/0 Port: 0 (0 = all ports)

Add Rule

Send Changes Reset

3. Select an appliance group from the **Appliance Group** drop-down list.
4. Click **Backup Existing Configuration First** to save your current, running configuration settings for the appliance group.
5. Under Add New Rule, select **start**, **end**, or a rule number from the **Insert Rule Before** drop-down list to insert a rule before the rule specified in the Rules list.
6. Type the IP address and netmask for the source subnet in the **Source Subnet** and **Netmask** text boxes.
7. Type the IP address, netmask, and port for the destination subnet in the **Destination Subnet**, **Netmask**, and **Port** text boxes. By default, the HP EFS WAN Accelerator applies the rule to all ports.
8. Click **Add Rule** to apply the rule to the running configuration.
9. Click **Send Changes** to write your settings to memory or click **Reset** to return the settings to their previous values.

TIP: To remove a rule, click the check box next to the name and click **Remove Selected Rules**. This action applies the settings to the running configuration. Click **Save** to write your settings to memory or click **Reset** to return the settings to their previous values.

To set a fixed target rule

1. Click the Appliance Setup tab to display the Appliance Setup: Service, Configuration page.
2. Click the Rules tab to display the Appliance Setup: Service, Rules, Auto-Discovery page.
3. Click the Fixed Target tab to display the Appliance Setup: Service, Rules, Fixed Target page.

Figure 3-37. Appliance Setup: Service, Rules, Fixed Target Page

Home | Local Setup | **Appliance Setup** | Reports | System Log | Help Logged in as: admin (logout)

Appliance Setup

- Service «
- Alarms
- Logging

- Upgrade Software
- Start/Stop Service
- Reboot Appliance

- Send CLI Command

Service

Configuration
Rules

Configure the in-path rules that should be pushed to the selected group of appliances.

Appliance Group: All
 ☒ Backup existing configuration first.

#	Action	Source	Destination	Port	Target	Port
def	Auto Discover	all	all	all	--	--

Remove Selected Rules

Add New Rule:
 Auto Discover
 Fixed Target
 Pass Through

Fixed target rules directly specify out-of-path appliances near the target server.

Insert Rule Before: end
 Source Subnet: 0.0.0.0/0
 Destination Subnet: 0.0.0.0/0
 Port: 0
 Target IP Address:
 Port: 7810
 Backup Target IP Address:
 Port: 7810

Add Rule

Send Changes

Reset

4. Select an appliance group from the **Appliance Group** drop-down list.
5. Click **Backup Existing Configuration First** to save your current, running configuration settings for the appliance group.
6. Under Add New Rule, select **start**, **end**, or a rule number from the **Insert Rule Before** drop-down list to insert a rule before the rule specified in the Rules list.
7. Type the IP address and netmask for the source subnet in the **Source Subnet** and **Netmask** text boxes.
8. Optionally, type the IP address, netmask, and port for the destination subnet in the **Destination Subnet**, **Netmask**, and **Port** text boxes.
9. Type the IP address and port number for the HP EFS WAN Accelerator that is the peer in the **Target IP Address** and **Port** text boxes.

The IP address must be the Primary Port IP address on the target HP EFS WAN Accelerator. The default port is **7810**.

10. If you have backup, out-of-path, HP EFS WAN Accelerator in your system (that is, failover support), type the IP address and port for the backup appliance in the **Backup IP Address** and **Port** text boxes. The default port is **7810**.
11. Click **Add Rule** to apply the rule to the running configuration.
12. Click **Send Changes** to write your settings to memory or click **Reset** to return the settings to their previous values.

TIP: To remove a rule, click the check box next to the name and click **Remove Selected Rules**. This action applies the settings to the running configuration. Click **Save** to write your settings to memory or click **Reset** to return the settings to their previous values.

IMPORTANT: Configuration rules remain in the HP EFS WAN Accelerator Manager for the Web session only—they do not remain in the HP EFS WAN Accelerator Manager after you log out. If you configure in-path rules on the HP EFS WAN Accelerator Manager, and send the changes to a group of HP EFS WAN Accelerators, each HP EFS WAN Accelerator will have those rules set on them permanently, but the HP EFS WAN Accelerator Manager does not retain the configuration rules you set.

To set a pass through rule

1. Click the Appliance Setup tab to display the Appliance Setup: Service, Configuration page.
2. Click the Rules tab to display the Appliance Setup: Service, Rules, Auto-Discovery page.

3. Click the Pass Through tab to display the Appliance Setup: Service, Rules, Pass Through page.

Figure 3-38. Appliance Setup: Service, Rules, Pass Through Page

HomeLocal SetupAppliance SetupReportsSystem LogHelp

Logged in as: admin (logout)

Appliance Setup

- Service «
- Alarms
- Logging
- Upgrade Software
- Start/Stop Service
- Reboot Appliance
- Send CLI Command

Service

ConfigurationRules

Configure the in-path rules that should be pushed to the selected group of appliances.

Appliance Group: AllBackup existing configuration first.

#	Action	Source	Destination	Port	Target	Port
def	Auto Discover	all	all	all	--	--

Remove Selected Rules

Add New Rule:Auto DiscoverFixed TargetPass Through

Pass-Through rules identify traffic that is to be passed through the network unoptimized.

Insert Rule Before: end

Source Subnet: 0.0.0.0/0

Destination Subnet: 0.0.0.0/0Port: 0

Add Rule

Send ChangesReset

4. Select an appliance group from the **Appliance Group** drop-down list.
5. Click **Backup Existing Configuration First** to save your current, running configuration settings for the appliance group.
6. Under Add New Rule, select **start**, **end**, or a rule number from the **Insert Rule Before** drop-down list to insert a rule before the rule specified in the Rules list.
7. Optionally, type the IP address and netmask for the source subnet in the **Source Subnet** and **Netmask** text boxes.
8. Type the IP address, netmask, and port for the destination subnet in the **Destination Subnet**, **Netmask**, and **Port** text boxes. By default, the HP EFS WAN Accelerator applies the rule to all ports.
9. Click **Add Rule** to apply the rule to the running configuration.
10. Click **Send Changes** to write your settings to memory or click **Reset** to return the settings to their previous values.

TIP: To remove a rule, click the check box next to the name and click **Remove Selected Rules**. This action applies the settings to the running configuration. Click **Save** to write your settings to memory or click **Reset** to return the settings to their previous values.

IMPORTANT: Configuration rules remain in the HP EFS WAN Accelerator Manager for the Web session only—they do not remain in the HP EFS WAN Accelerator Manager after you log out. If you configure in-path rules on the HP EFS WAN Accelerator Manager, and send the changes to a group of HP EFS WAN Accelerators, each HP EFS WAN Accelerator will have those rules set on them permanently, but the HP EFS WAN Accelerator Manager does not retain the configuration rules you set.

Setting Alarms and Fault Reporting for Appliance Groups

The following section describes how to set alarm thresholds, email notification parameters for events and failures, and Simple Network Management Protocol (SNMP) communities and traps for groups of HP EFS WAN Accelerators. It contains the following sections:

- ◆ [“Setting Alarm Thresholds for Appliance Groups,”](#) next
- ◆ [“Setting Fault Notification for Appliance Groups”](#) on page 99
- ◆ [“Setting SNMP Traps for Appliance Groups”](#) on page 101

Setting Alarm Thresholds for Appliance Groups

To set the alarm threshold

You set alarm thresholds and activate alarms for extended memory paging and software mismatches for groups of HP EFS WAN Accelerators in the Appliance Setup: Alarms, Alarms page.

Alarms have rising and reset thresholds. When an alarm reaches the rising threshold, it is activated; it is reset when it reaches the lowest or reset threshold. After an alarm is triggered it is not triggered again until it has fallen below the reset threshold.

1. Click the Appliance Setup tab to display the Appliance Setup: Service, Configuration page.
2. Click Alarms in the left menu to display the Appliance Setup: Alarms, Alarms page.

Figure 3-39. Appliance Setup: Alarms, Alarms Page

Home :: Local Setup :: **Appliance Setup** :: Reports :: System Log :: Help Logged in as: admin (logout)

Appliance Setup

- Service
- **Alarms** «
- Logging

• Upgrade Software

• Start/Stop Service

• Reboot Appliance

• Send CLI Command

Alarms

Alarms Notification SNMP Traps

Configure the alarm settings that should be pushed to the selected group of appliances.

Appliance Group: All Backup existing configuration first.

CPU Alarm

☒ Raise Alarm When CPU Utilization Reaches:

Rising Threshold: 90

Reset Threshold: 70

Data Store Alarm

☒ Send email if stale data replaced by fresh data is less than 1 day(s) old

Additional Alarms

☒ Raise Alarm When Extended Memory Paging Activity is Detected

☒ Raise Alarm If a Software Version Mismatch is Detected in the Network

Send Changes Reset

3. Select an appliance group from the **Appliance Group** drop-down list.
4. Click **Backup Existing Configuration First** to save your current, running configuration settings for the appliance group.
5. Under CPU Alarm, click **Raise Alarm when CPU Utilization Reaches** and type a percentage in the **Rising Threshold** and **Reset Threshold** text boxes.
6. Under Data Store Alarm, click the check box and type a number in the **Send email if stale data replaces fresh data is less than ____ day(s) old** text box. You will receive email notification when all the data in the data store is completely replaced with new data in less than the time period specified here.
7. Under Additional Alarms, click **Raise Alarm When Extended Memory Paging Activity Detected** to raise an alarm when abnormal memory page swapping occurs.
8. Click **Raise Alarm if A Software Version Mismatch Is Detected in the Network** to raise an alarm if the system detects that an HP EFS WAN Accelerator is running an incompatible version of the HP EFS WAN Accelerator software.
9. Click **Send Changes** to write your settings to memory or click **Reset** to return the settings to their previous values.

Setting Fault Notification for Appliance Groups

You set email notification parameters for groups of HP EFS WAN Accelerators in the Appliance Setup: Alarms, Notification page.

IMPORTANT: Make sure you provide a valid Simple Mail Transfer Protocol (SMTP) server to ensure that the users you specify receive email notifications for events and failures.

To set event and failure notification

1. Click the Appliance Setup tab to display the Appliance Setup: Service, Configuration page.
2. Click Alarms in the left menu to display the Appliance Setup: Alarms page.
3. Click the Notification tab to display the Appliance Setup: Alarms, Notification page.

Figure 3-40. Appliance Setup: Alarms, Notification Page

Home Local Setup Appliance Setup Reports System Log Help Logged in as: admin (logout)

Appliance Setup

- Service
- **Alarms** «
- Logging

• Upgrade Software

• Start/Stop Service

• Reboot Appliance

• Send CLI Command

Alarms

Alarms Notification SNMP Traps

Configure the notification settings that should be pushed to the selected group of appliances.

Appliance Group: All Backup existing configuration first.

Events

- ☒ Report Events to SNMP Agent
- ☒ Report Events via Email

Email Addresses: (separate each address by a space)

Failures

- ☒ Report Failures to Technical Support
- ☒ Report Failures via Email

Email Addresses: (separate each address by a space)

SMTP Server for Emails

SMTP Server:

SNMP Settings

Sys Contact:

Sys Location:

Read Only Community Name: public

Send Changes Reset

4. Select an appliance group from the **Appliance Group** drop-down list.
5. Click **Backup Existing Configuration First** to save your current, running configuration settings for the appliance group.
6. Under Events, click **Report Events to SNMP Agent** to report activity to an SNMP agent.
7. Click **Report Network Interface Duplex Errors** to report duplex errors and type the email addresses of the users you want to notify of duplex errors in the **Email Addresses** text box. Separate each email address by a space.
8. Click **Report Failures via Email** and type the email addresses of the users you want to notify of events in the **Email Addresses** text box. Separate each email address by a space.
9. Under Failures, click **Report Failures to Technical Support** to have serious failures such as system crashes reported to HP technical support. HP recommends that you activate this feature so that problems are promptly corrected.
10. Click **Report Failures via Email** and type the email addresses of the users you want to notify of failures in the **Email Addresses** text box. Separate each email address by a space.
11. Under SMTP Server for Emails, type a valid SMTP server in the **SMTP Server** text box.

NOTE: External DNS and external access for SMTP traffic is required for this feature to function.

12. Under SNMP Settings, type the SNMP contact in the **Sys Contact** text box.
13. Type the SNMP location in the **Sys Location** text box.
14. Type the read-only community name in the **Read Only Community Name** text box. This is the read-only string that gathers status and statistics from the edge border router. For example: **ReAdOnLy**.
15. Click **Send Changes** to write your settings to memory or click **Reset** to return the settings to their previous values.

Setting SNMP Traps for Appliance Groups

Optionally, set SNMP traps for groups of HP EFS WAN Accelerators in the Appliance Setup: Alarms, SNMP Traps page. Traps are messages sent by an SNMP agent that indicate the occurrence of an event.

To set an SNMP trap

1. Click the Appliance Setup tab to display the Appliance Setup: Service, Configuration page.
2. Click Alarms in the left menu to display the Appliance Setup: Alarms page.
3. Click the SNMP Traps tab to display the Appliance Setup: Alarms, SNMP Traps page.

Figure 3-41. Appliance Setup: Alarms, SNMP Traps Page

Home :: Local Setup :: **Appliance Setup** :: Reports :: System Log :: Help Logged in as: admin (logout)

Appliance Setup

- Service
- **Alarms** «
- Logging

• Upgrade Software

• Start/Stop Service

• Reboot Appliance

• Send CLI Command

Alarms

Alarms **Notification** **SNMP Traps**

Configure the SNMP trap receivers that should be pushed to the selected group of appliances.

Appliance Group: All ☐ Backup existing configuration first.

Trap Receiver	Community	Type
No trap receivers.		

Remove Selected Receivers

Add New Trap Receiver:

Receiver IP:

Community:

Type: v1

Add Trap Receiver

Send Changes Reset

4. Select an appliance group from the **Appliance Group** drop-down list.
5. Click **Backup Existing Configuration First** to save your current, running configuration settings for the appliance group.
6. Under Add New Trap Receiver, type the IP address for the SNMP trap in the **Receiver IP** text box.
7. Type the SNMP community name in the **Community** text box.
8. Select the SNMP version number either **v1** or **v2** from the **Type** drop-down list.
9. Select **True** or **False** from the **Enabled** drop-down list to enable or disable SNMP traps.
10. Click **Add Trap Receiver** to apply the settings to the running configuration.
11. Click **Send Changes** to write your settings to memory or click **Reset** to return the settings to their previous values.

TIP: To remove an SNMP trap receiver, click the check box next to the name and click **Remove Selected Receivers**. This action applies the settings to the running configuration. Click **Save** to write your settings to memory or click **Reset** to return the settings to their previous values.

TIP: To disable an SNMP trap receiver, click the check box next to the name and click **Disable**. To enable an SNMP trap receiver, click the check box next to the name and click **Enable**.

Setting Logging Options for Appliance Groups

The following section describes how to set local and remote logging for the HP StorageWorks Enterprise File Services WAN Accelerator Manager. It contains the following sections:

- ◆ [“Setting Local Logging for Appliance Groups,”](#) next
- ◆ [“Setting Remote Logging for Appliance Groups”](#) on page 105

Setting Local Logging for Appliance Groups

You set log severity levels and rotation parameters for groups of HP EFS WAN Accelerators in the Appliance Setup: Logging, Local page.

To set the log severity level and log rotation

1. Click the Appliance Setup tab to display the Appliance Setup: Networking, Name & Interfaces page.
2. Click Logging in the left menu to display the Appliance Setup: Logging, Local page.

Figure 3-42. Appliance Setup: Logging, Local Page

Home Local Setup Appliance Setup Reports System Log Help Logged in as: admin (logout)

Appliance Setup

- Service
- Alarms
- **Logging** «
- Upgrade Software
- Start/Stop Service
- Reboot Appliance
- Send CLI Command

Logging

Local Remote

Configure log settings that should be pushed to the selected group of appliances.

Appliance Group: All Backup existing configuration first.

Log Filtering

Minimum Severity: Notice

Log Rotation

☒ Rotate every Day

☐ Rotate when log reaches 16 MB

Keep at most 10 log file(s)

Send Changes Reset

3. Select an appliance group from the **Appliance Group** drop-down list.
4. Click **Backup Existing Configuration First** to save your current, running configuration settings for the appliance group.
5. Under Log Filtering, select a severity level from the **Minimum Severity** drop-down list.
6. Under Log Rotation, click **Rotate Every** and select **Day**, **Week**, or **Month** from the drop-down list to rotate logs according to a specific time period.
7. Click **Rotate when log reaches** and type a number to rotate logs according to a log file size.
8. Type a number in the **Keep at most** text box to set a limit for the number of logs to store.
9. Click **Send Changes** to write your settings to memory or click **Reset** to return the settings to their previous values.

Setting Remote Logging for Appliance Groups

To set a remote system log server

Optionally, you set remote system log (**syslog**) servers for groups of HP EFS WAN Accelerators in the Appliance Setup: Networking, Logging, Remote page.

1. Click the Appliance Setup tab to display the Appliance Setup: Networking, Name & Interfaces page.
2. Click Logging in the left menu to display the Appliance Setup: Logging page.
3. Click the Remote tab to display the Appliance Setup: Logging, Remote page.

Figure 3-43. Appliance Setup: Logging, Remote Page

The screenshot displays the 'Appliance Setup: Logging, Remote' page. The top navigation bar includes 'Home', 'Local Setup', 'Appliance Setup', 'Reports', 'System Log', and 'Help'. The user is logged in as 'admin'. The left sidebar shows the 'Appliance Setup' menu with options like 'Service', 'Alarms', 'Logging', 'Upgrade Software', 'Start/Stop Service', 'Reboot Appliance', and 'Send CLI Command'. The main content area is titled 'Logging' and has two tabs: 'Local' and 'Remote'. The 'Remote' tab is active, showing a message: 'This page is optional. Add any remote syslog servers you want to use for logging.' Below this, there is a section for 'Appliance Group' with a dropdown menu set to 'All' and a checkbox for 'Backup existing configuration first.' which is checked. A table titled 'Remote Syslog Server' with a 'Min. Severity' column is shown, currently containing no entries. Below the table is a 'Remove Selected Servers' button. The 'Add Remote Syslog Server' section includes input fields for 'Server IP' and 'Minimum Severity' (set to 'Notice'), and an 'Add Server' button. At the bottom right, there are 'Send Changes' and 'Reset' buttons.

4. Select an appliance group from the **Appliance Group** drop-down list.
5. Click **Backup Existing Configuration First** to save your current, running configuration settings for the appliance group.
6. Under Add Remote Syslog Server, type the IP address for the remote server in the **Server IP** text box.
7. Select the severity level for the logs from the **Minimum Severity** drop-down list.
8. Click **Add Server** to apply your settings to the running configuration.
9. Click **Send Changes** to write your settings to memory or click **Reset** to return the settings to their previous values.

TIP: To remove a remote server, click the check box next to the name and click **Remove Selected Servers**. This action applies the settings to the running configuration. Click **Save** to write your settings to memory or click **Reset** to return the settings to their previous values.

Upgrading Software for Appliance Groups

The following section describes how to upgrade groups of HP EFS WAN Accelerators to a new version of the HP EFS WAN Accelerator software and how to revert to a previous version of the HP EFS WAN Accelerator software.

Upgrading Software for Appliance Groups

You can upgrade groups of HP EFS WAN Accelerators from a Uniform Resource Locator (URL) or from a local file in the Appliance Setup: Software Upgrade page. You can also revert to a previous version of the software.

NOTE: HTTP (Hyper Text Transfer Protocol) and File Transfer Protocol (FTP) URLs are valid.

**To upgrade software
for appliance groups**

1. Click the Appliance Setup tab to display the Appliance Setup: Service, Configuration page.
2. Click Upgrade Software in the left menu to display the Appliance Setup: Software Upgrade page.

Figure 3-44. Appliance Setup: Software Upgrade Page

Home :: Local Setup :: **Appliance Setup** :: Reports :: System Log :: Help

Logged in as: **admin** (logout)

Appliance Setup

- Service
- Alarms
- Logging
- **Upgrade Software** «
- Start/Stop Service
- Reboot Appliance
- Send CLI Command

Upgrade Software

Select the group of appliances that should have their software upgraded.

Appliance Group: All

Software Image URL:

Upgrade Appliance

3. Select an appliance group from the **Appliance Group** drop-down list.
4. Type the URL in the **Software Image URL** text box to install the software from a URL.
5. Click **Upgrade Appliance** to install the new version of the software

Starting, Stopping, and Restarting the HP EFS WAN Accelerator Service on Appliance Groups

The following section describes how to start, stop, and restart the HP EFS WAN Accelerator service on groups of remote HP EFS WAN Accelerators.

Starting, Stopping, and Restarting the HP EFS WAN Accelerator Service on Appliance Groups

You can start, stop, and restart the HP EFS WAN Accelerator service on groups of HP EFS WAN Accelerators in the Appliance Setup: Start/Stop Service page.

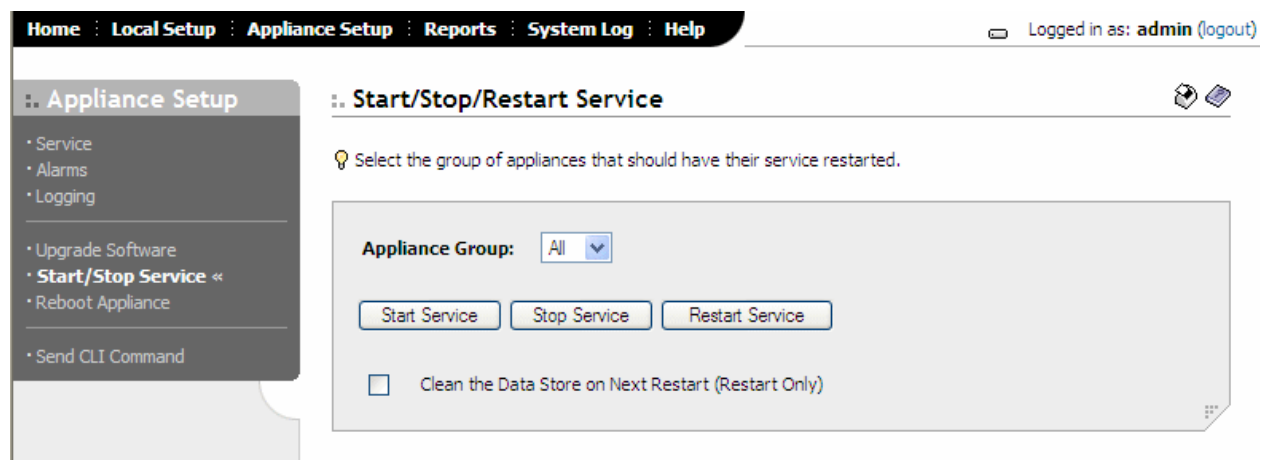
The HP EFS WAN Accelerator service is a daemon that executes in the background performing operations when required. Because many of the HP EFS WAN Accelerator service commands are initiated at startup, it is important to restart the HP EFS WAN Accelerator service when you have made changes to your configuration.

WARNING: Restarting the HP EFS WAN Accelerator disrupts existing network connections that are proxied through the HP EFS WAN Accelerator.

To start the HP EFS WAN Accelerator service

1. Click the Appliance Setup tab to display the Appliance Setup: Service, Configuration page.
2. Click Start/Stop Service in the left menu to display the Appliance Setup: Start/Stop Service page.

Figure 3-45. Appliance Setup: Start/Stop Service Page



3. Select an appliance group from the **Appliance Group** drop-down list.
4. Click **Start Service** to start the HP EFS WAN Accelerator service. Starting the service takes a few seconds.

TIP: To stop the HP EFS WAN Accelerator service, click **Stop Service**. To restart the HP EFS WAN Accelerator service, click **Restart Service**.

TIP: To remove data from the data store, click **Clean the Data Store on Next Restart (Restart Only)**.

Rebooting Appliance Groups

The following section describes how to reboot the HP EFS WAN Accelerator.

Rebooting Appliance Groups

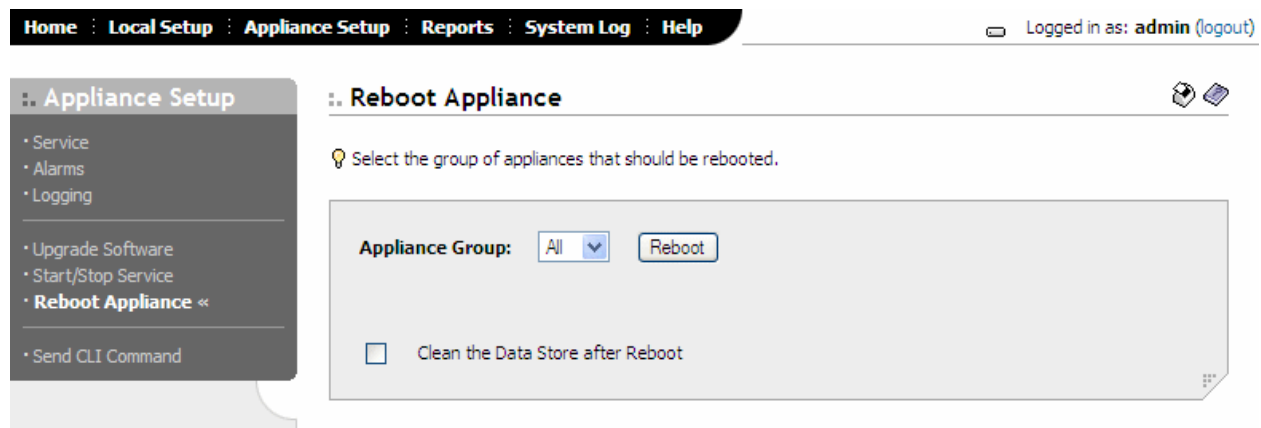
You reboot groups of HP EFS WAN Accelerators in the Appliance Setup: Reboot Appliance page.

Rebooting HP EFS WAN Accelerators disrupts existing network connections that are currently proxied through the appliance. Rebooting can take a few minutes.

To reboot an appliance group

1. Click the Appliance Setup tab to display the Appliance Setup: Service, Configuration page.
2. Click Reboot Appliance to display the Appliance Setup: Reboot Appliance page.

Figure 3-46. Appliance Setup: Reboot Appliance Page



3. Select an appliance group from the **Appliance Group** drop-down list and click **Reboot**. After you click **Reboot**, you are logged out of the system and it is rebooted.

TIP: To remove data from the data store, click the **Clean the Data Store after Reboot** check box.

Sending HP EFS WAN Accelerator CLI Commands to Appliance Groups

The following section describes how to send batch HP EFS WAN Accelerator command-line interface (CLI) commands to groups of remote HP EFS WAN Accelerators.

Sending HP EFS WAN Accelerator CLI Commands to Appliance Groups

You send batch configuration changes to groups of HP EFS WAN Accelerators in the Appliance Setup: Send CLI Command page. A batch configuration is a set of configuration settings that are sent out at the same time through the HP EFS WAN Accelerator Manager and applied to the appliance group as a whole. For example, you can:

- ◆ Send the CLI command to a group of appliances and return the results.
- ◆ Perform a backup of the configuration on the HP EFS WAN Accelerator before issuing the CLI commands.

You are notified when the set of CLI commands has finished running.

IMPORTANT: The last command you issue must be the **configuration write** command for your configuration changes to be saved.

To send CLI commands to appliance groups

1. Click the Appliance Setup tab to display the Appliance Setup: Service, Configuration page.
2. Click Send CLI Command to display the Appliance Setup: Send CLI Command page.

Figure 3-47. Appliance Setup: Send CLI Command Page

The screenshot shows the 'Send CLI Command' page in the HP EFS WAN Accelerator Manager. The top navigation bar includes links for Home, Local Setup, Appliance Setup, Reports, System Log, and Help. The user is logged in as 'admin'. The left sidebar shows the 'Appliance Setup' menu with options like Service, Alarms, Logging, Upgrade Software, Start/Stop Service, Reboot Appliance, and Send CLI Command (which is currently selected). The main content area is titled 'Send CLI Command' and includes a help icon and a description: 'Use this form to send a set of CLI commands directly to a group of appliances.' The form contains an 'Appliance Group' dropdown menu set to 'All', a 'CLI Commands (one per line):' text area, and 'Send' and 'Clear' buttons.

3. Select an appliance group from the **Appliance Group** drop-down list.
4. Click **Backup Existing Configuration First** to save your current, running configuration settings for the appliance group.
5. Type the CLI commands in the **CLI Commands** text box. Type one CLI command on each line.

IMPORTANT: The last command you issue must be the **configuration write** command for your configuration changes to be saved.

6. Click **Save** to write your settings to memory or click **Clear** to clear the CLI Commands text box.

Viewing Appliance Group Reports

The following section describes how to view HP EFS WAN Accelerator group reports.

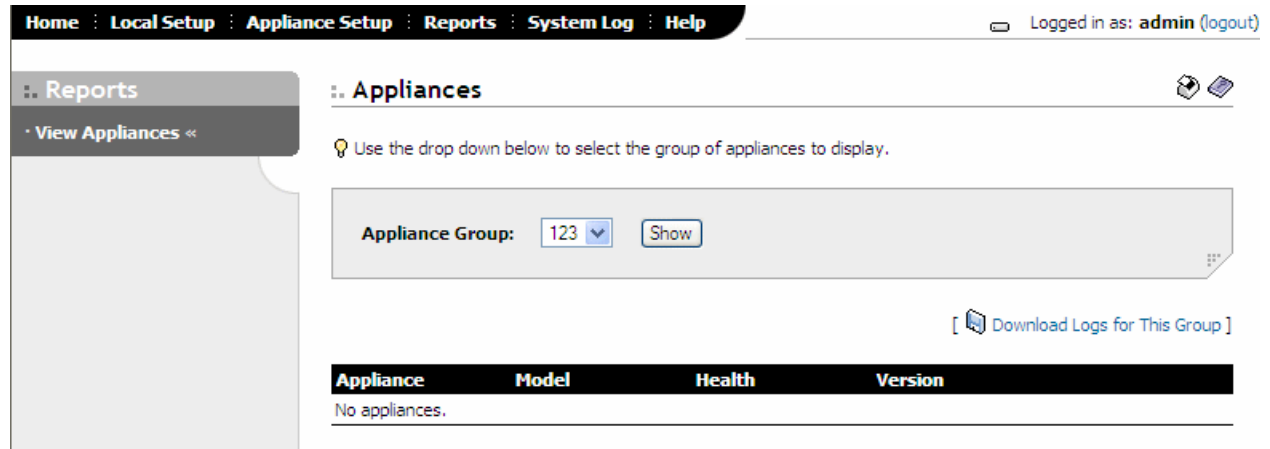
Viewing Appliance Group Status Reports

To view appliance group reports

You view group status reports in the Reports: Appliances page. Monitoring groups of HP EFS WAN Accelerators provides a high-level overview of the health and status of each HP EFS WAN Accelerator in that group, monitoring an individual HP EFS WAN Accelerator provides detailed statistics and information on that HP EFS WAN Accelerator and the connections to its peers.

1. Click Reports in the left menu to display the Reports: Appliances page.

Figure 3-48. Reports: Appliances Page



2. Select an appliance group from the **Appliance Group** drop-down list and click **Show** to display the status of the HP EFS WAN Accelerator in the group.

TIP: Click the HP EFS WAN Accelerator name to display the Local Setup: Appliance: *Appliance Name* page.

TIP: Click the **Disk** icon to download the logs for the selected appliance group.

Viewing HP StorageWorks Enterprise File Services WAN Accelerator Manager Logs

The following section describes how to view HP EFS WAN Accelerator Manager logs.

Viewing HP EFS WAN Accelerator Manager Logs

You can view HP EFS WAN Accelerator Manager logs in the Logging: View System Log page. Use system logs to monitor HP EFS WAN Accelerator activity and to troubleshoot problems with the appliance. The most recent log events are listed first.

To view HP EFS WAN Accelerator Manager logs

1. Click the Logging tab to display the Logging: View System Log page.

Figure 3-49. Logging: View System Log Page

Home Local Setup Appliance Setup Reports System Log Help

Logged in as: admin (logout)

System Log

- Current Log
- Archived Log 1 «
- Launch Continuous Log

Rotate Logs Now

Archived Log 1

« Prev Page: 1 [2] Next »

Event

```

Jan 7 23:27:33 amnesiac -- admin[382]: ROOT LOGIN ON ttyS0
Jan 7 23:27:33 amnesiac cli[394]: [cli.NOTICE]: user admin: CLI launched
Jan 7 23:27:33 amnesiac wizard[394]: [wizard.NOTICE]: Wizard launched
Jan 7 23:27:34 amnesiac wizard[394]: [wizard.NOTICE]: Wizard exiting
Jan 7 23:27:34 amnesiac cli[394]: [cli.NOTICE]: user admin: CLI launched
Jan 7 23:27:35 amnesiac cli[394]: [cli.NOTICE]: user admin: Entering enable mode
Jan 7 23:27:35 amnesiac mgmtd[329]: [mgmtd.NOTICE]: Action performed by user 385-0-0
Jan 7 23:27:36 amnesiac cli[394]: [cli.NOTICE]: user admin: Entering configuration mode
Jan 7 23:27:39 tcf40 mgmtd[329]: [mgmtd.NOTICE]: EVENT: /mgmtd/notify/dbchange
Jan 7 23:27:40 tcf40 mgmtd[329]: [mgmtd.NOTICE]: Action performed by user admin
Jan 7 23:27:40 tcf40 mgmtd[329]: [mgmtd.NOTICE]: Configuration changed by user admin
  
```

2. Below the Event list, click the previous pages to view older logs. To view previous pages, click **Prev**. To view the following pages, click **Next**.

TIP: Click the **Disk** icon in the upper right corner to download the log file.

TIP: Click **Launch Continuous Log**, to display continuous log messages in your Web browser. This feature might not be supported in all Web browsers.

TIP: Click **Rotate Logs Now** to archive the current log.

Getting Help

The Help tab provides you with the following links to help you administer and manage the HP EFS WAN Accelerator:

- ◆ **Technical Support.** HP technical support.
- ◆ **CLI Commands.** Display the HP EFS WAN Accelerator Manager User's Guide, which includes the HP EFS WAN Accelerator Manager command-line interface.
- ◆ **Online Help.** A table of contents of the help topics in the Management Console.

Contacting Technical Support

To email technical support

You can obtain the technical support phone number and email address from the Help: Technical Support page.

1. Click the Help tab to display the Help: Technical Support page
2. Click the email link to display a blank email message in a new window.

Viewing CLI Commands

You can view the HP EFS WAN Accelerator Manager User's Guide (which includes the HP EFS WAN Accelerator Manager command-line interface) in the Help: CLI Commands page.

To view CLI commands

1. Click the Help tab to display the Help: Technical Support page.
2. Click CLI Commands in the left menu to display the Help: CLI Commands page.
3. Click the **Click here for an online, including CLI commands.** link to go to the manual. The manual appears in a new window.

TIP: To print the guide, click **PDF** in the upper right corner.

Viewing Online Help Contents**To view online help contents**

You can view the table of contents for online help in the Help: Online Help page. The online help contains page-level help for each page in the HP EFS WAN Accelerator Manager.

1. Click the Help tab to display the Help: Technical Support page.
2. Click Online Help in the left menu to display the Help: Online Help page.
3. Click the **Click here for online help** link to display the online help table of contents.

APPENDIX A

Command-Line Interface for HP EFS WAN Accelerator Manager

In This Appendix

This appendix describes how to access and use the HP EFS WAN Accelerator Manager CLI. This chapter includes the following sections:

- ◆ [“Using the Command-Line Interface,”](#) next
- ◆ [“Network Interface Commands”](#) on page 120
- ◆ [“Name Resolution Commands”](#) on page 123
- ◆ [“Routing Commands”](#) on page 125
- ◆ [“ARP Commands”](#) on page 126
- ◆ [“Event Logging Configuration and Viewing Commands”](#) on page 127
- ◆ [“User Accounts Commands”](#) on page 130
- ◆ [“Secure Shell Server Commands”](#) on page 134
- ◆ [“NTP, Clock, and Time Zone Commands”](#) on page 135
- ◆ [“Event Notification Commands”](#) on page 138
- ◆ [“Diagnostic Commands”](#) on page 141
- ◆ [“Statistics Commands”](#) on page 145
- ◆ [“Configuration File Management Commands”](#) on page 148
- ◆ [“License Key Commands”](#) on page 155
- ◆ [“Image Management Commands”](#) on page 156
- ◆ [“CLI Option Commands”](#) on page 159
- ◆ [“Enable Configuration Mode and Persistence Commands”](#) on page 161
- ◆ [“SNMP Commands”](#) on page 162
- ◆ [“Web Commands”](#) on page 165

Using the Command-Line Interface

This section assumes you have already performed the initial setup of the HP EFS WAN Accelerator Manager using the configuration wizard.

To connect the HP EFS WAN Accelerator Manager CLI

1. You can connect to the HP EFS WAN Accelerator Manager CLI using one of the following options:
 - ◆ An ASCII terminal or emulator that can connect to the serial console. It must have the following settings: 9600 baud, 8 bits, no parity, 1 stop bit, and no flow control.
 - ◆ A computer with a Secure Shell (**ssh**) client that is connected to the HP EFS WAN Accelerator Manager NIC1 (Primary) port.

2. At the system prompt, enter the following command:

```
ssh admin@host.domain
```

or

```
ssh admin@ipaddress
```

3. You are prompted for the administrator password. This is the password you set during the initial configuration process. (The default password is **password**.)

You can also log in as a monitor user (**monitor**) . Monitor users cannot make configuration changes to the system. Monitor users can view connected HP EFS WAN Accelerators, and performance and system reports.

Overview of the HP EFS WAN Accelerator Manager CLI

The HP EFS WAN Accelerator Manager CLI is divided into the following modes:

- ◆ **User.** When you start an HP EFS WAN Accelerator Manager CLI session, you begin in the default, user mode. From the user mode you can run common network tests such as **ping**. You do not enter a command to enter this mode. To exit this mode, enter **exit** at the command line.
- ◆ **Privileged.** To have access to all commands, you must enter privileged mode. From privileged mode, you can enter any privileged command or enter configuration mode. You must be an administrator user to enter privileged mode.

NOTE: You cannot enter privileged mode if you are a monitor user.

- ◆ **Configuration.** Using the configuration mode, you can make changes to the running configuration. If you save the configuration, these commands are stored when the system reboots. To enter configuration mode you must first be in privileged mode. To exit this mode, enter **exit** at the command line.

The commands available to you depend on which mode you are in. Entering a question mark (?) at the system prompt provides a list of commands for each command mode.

Mode	Access Method	System Prompt	Exit Method	Description
user	Each HP EFS WAN Accelerator Manager CLI session begins in user mode.	host >	exit	<ul style="list-style-type: none"> Perform common network tests such as ping.
privileged	Enter the enable command at the system prompt while in user mode.	host #	disable no enable Note: To exit the system, enter the exit command.	<ul style="list-style-type: none"> Restart and reboot the system. Display system information. Verify configuration information.
configuration	Enter the configure terminal command at the system prompt while in privileged mode.	host (config) #	exit	<ul style="list-style-type: none"> Configure system parameters.

Entering Commands

The HP EFS WAN Accelerator Manager CLI accepts abbreviations for commands. The following example is the abbreviation for the **configure terminal** command:

```
tilden # config terminal
```

You can also press **TAB** to complete an HP EFS WAN Accelerator Manager CLI command automatically.

Angle Bracketed Parameters

This section summarizes the meaning of angle bracketed parameters for the HP EFS WAN Accelerator Manager CLI:

- ◆ **<ifname>**. An interface name, for example: **eth0 eth1, lo** (loopback), and so forth. This corresponds to the value of the wildcard under **/net/** interface in the management node hierarchy.
- ◆ **<URL>**. A normal URL, using any protocol that **wget** supports, including **http, https, and ftp**; or a pseudo-URL specifying an **scp** file transfer. The **scp** pseudo-URL format is

```
scp://username:password@hostname/path/filename
```

The path is an absolute path. Paths relative to the home directory of the user are not currently supported.

Accessing Online Help

At the system prompt, type the full or partial command string followed by a question mark (?). The HP EFS WAN Accelerator Manager CLI displays the command keywords or parameters for the command, and a short description.

To access online help

- At the system prompt enter the following command:

```
tilden (config) # show ?
```

The HP EFS WAN Accelerator Manager CLI does not display the question mark.

Error Messages

If at any time the system does not recognize the command or parameter, it displays the following message:

```
tilden (config) # logging files enable
% Unrecognized command "enable".
Type "logging files ?" for help.
```

If a command is incomplete, the following message is displayed:

```
tilden (config) # logging
% Incomplete command.
Type "logging ?" for help.
```

Command Negation

You can type the **no** command before many of the commands to negate the syntax. Depending on the command or the parameters, command negation disables the command or returns the parameter to the default value.

Saving Configuration Changes

The **show configuration** command displays the running configuration of the system. When you make a configuration change to the system, the change becomes part of the running configuration.

The change does not automatically become part of the configuration file in memory until you write the file to memory. If you do not save your changes to memory, they are lost when the system restarts.

To save all configuration changes to memory, you must enter the **write memory** command in privileged mode.

Network Interface Commands

The following sections describes the interface commands for the HP EFS WAN Accelerator Manager. It contains the following commands:

- ◆ ["interface,"](#) next
- ◆ ["interface duplex" on page 121](#)
- ◆ ["interface speed" on page 121](#)
- ◆ ["interface dhcp" on page 122](#)
- ◆ ["interface shutdown" on page 122](#)
- ◆ ["show interface" on page 122](#)

Interface records for interfaces not detected by the system cannot be implicitly created by setting options on them. They must be explicitly created using the **interface <ifname> create** command.

interface

Description Configures network interface address. The **no** command option disables the interface settings.

Syntax `interface {<ifname> ip address <addr> <netmask>}`

Parameters

<ifname>	Specifies the interface name: aux, lan, wan, primary, in-path.
ip address <addr> <netmask>	Specifies the IP address of the interface and the netmask. Netmask can be a dotted quad (e.g. 255.255.255.0) or a mask length with a slash in front of it (for example, /24).

Example

```
minna (config) # interface lan ip address 10.0.0.1
255.255.255.0
minna (config) #
```

interface duplex

Description Configures network interface duplex setting. The **no** command option disables the interface duplex settings.

Syntax `interface {<ifname> duplex <duplex>}`

Parameters

<ifname>	Specifies the interface name: aux, lan, wan, primary, in-path.
duplex <duplex>	Specifies the duplex setting for the interface.

Example

```
minna (config) # interface lan duplex full
minna (config) #
```

interface speed

Description Configures network interface duplex setting. The **no** command option disables the interface speed settings.

Syntax `interface {<ifname> speed <speed>}`

Parameters

<ifname>	Specifies the interface name: aux, lan, wan, primary, in-path.
speed <speed>	Specifies the speed setting for the interface.

Example

```
minna (config) # interface lan speed 100
minna (config) #
```

interface dhcp

Description Enables Dynamic Host Configuration Protocol (DHCP) on the interface. The IP address and netmask for the interface are assigned by DHCP. Setting the IP address and netmask disables DHCP implicitly, although it can also be disabled explicitly using the **no** form of this command.

Syntax `interface <ifname> dhcp`

Parameters

<ifname>	Specifies the interface name: aux, lan, wan, primary, in-path .
-----------------------	--

Example

```
(config) # interface lan dhcp 100
(config) #
```

interface shutdown

Description Disables the specified interface. The no command option enables the specified interface.

Syntax `interface <ifname> shutdown`

Parameters

<ifname>	Specifies the interface name: aux, lan, wan, primary, in-path .
-----------------------	--

Example

```
minna (config) # interface primary shutdown
minna (config) #
```

show interface

Description Displays interface settings for specified interface or all interface settings if one is not specified.

Syntax `interface {<ifname>} [configured | brief]`

Parameters

<ifname>	Specifies the interface name: aux, lan, wan, primary, in-path .
configured brief	Displays interface settings.
brief	Displays the abbreviated runtime state, with the interface statistics excluded.

Example

```
minna (config) # show interface lan
Interface lan state
Up:                no
IP address:
Netmask:
Speed:             UNKNOWN
```

```
Duplex: UNKNOWN
Interface type: ethernet
MTU: 1500
HW address: 00:30:64:02:3D:F9
RX bytes: 0
RX packets: 0
RX mcast packets: 0
RX discards: 0
RX errors: 0
RX overruns: 0|
RX frame: 0
TX bytes: 0
TX packets: 0
TX discards: 0
TX errors: 0
TX overruns: 0
TX carrier: 0
TX collisions: 0
```

Name Resolution Commands

The following section describes name resolution commands for the HP EFS WAN Accelerator Manager. It contains the following commands:

- ◆ [“hostname,” next](#)
- ◆ [“ip name-server” on page 123](#)
- ◆ [“ip domain-list” on page 124](#)
- ◆ [“ip host” on page 124](#)
- ◆ [“show hosts” on page 124](#)

hostname

Description Sets the host name for this system. The **no** command option removes the hostname for this system.

Syntax `hostname <hostname>`

Parameters

<hostname>	Specifies the host name. Do not include the domain name.
-------------------------	--

Example

```
minna (config) # hostname nova
minna (config) #
```

ip name-server

Description Sets the DNS name server. The **no** command option unsets the DNS name server.

Syntax `ip name-server <addr>`

Parameters

<addr>	Specifies the IP address.
---------------------	---------------------------

Example

```
minna (config) # ip name-server 10.10.10.1
minna (config) #
```

ip domain-list

Description Adds a domain name to the domain list for resolving host names. The **no** command option removes a domain from the domain list.

Syntax **ip domain list <domain>**

Parameters

<domain>	Specifies the domain name.
-----------------------	----------------------------

Example

```
minna (config) # ip domain-list example.com
minna (config) #
```

ip host

Description Adds an entry to the static host table. The **no** command option removes an entry from the static host table.

Syntax **ip host <hostname> <addr>**

Parameters

<hostname>	Specifies the host name.
-------------------------	--------------------------

<addr>	Specifies the IP address.
---------------------	---------------------------

Example

```
minna (config) # ip host park 10.10.10.1
minna (config) #
```

show hosts

Description Displays HP EFS WAN Accelerator system hosts.

Syntax **show hosts**

Parameters None

Example

```
minna # show hosts
Hostname: minna
Name server: 10.0.0.0 (configured)
Domain name: domain.com (configured)
Domain name: domain.com (configured)
```

```
IP 127.0.0.0 maps to hostname localhost
minna #
```

Routing Commands

The following section describes the routing commands. It contains the following commands:

- ◆ [“ip default-gateway,”](#) next
- ◆ [“ip route”](#) on page 125
- ◆ [“show ip”](#) on page 126

ip default-gateway

Description	Sets the default gateway route. The no command option unsets the default gateway IP address.
Syntax	ip default-gateway <addr>
Parameters	

<addr>	Specifies the IP address.
--------	---------------------------

Example	<pre>minna (config) # ip default-gateway 10.10.10.1 minna (config) #</pre>
---------	--

ip route

Description	Adds a static route. The no command option disables the static route. If no ip route command is called with no parameters, it removes all static routes. If it is called with only a network prefix and mask, it deletes all routes for that prefix.
Syntax	ip route {<network prefix> <netmask> <next-hop-IP-addr>}
Parameters	

<network prefix>	Specifies the network prefix.
<network netmask>	Specifies the netmask.
<next-hop-IP-addr>	Specifies the next hop IP address.

Example	<pre>minna (config) # ip route 193.166.0/24 10.10.10.1 minna (config) #</pre>
---------	---

show ip

Description Displays IP settings such as host name, Domain Name Service (DNS), and static route.

Syntax `show ip {default-gateway [static] | route [static]}`

Parameters

default gateway [static]	Displays the default gateway or static default gateway.
route [static]	Displays the IP route or IP static route.

Example

```
minna # show ip route
Destination      Mask             Gateway
10.0.0.4         255.255.0.0     0.0.0.0
default         0.0.0.0         10.0.0.1
minna #
```

ARP Commands

The following section describes the Address Resolution Protocol commands. It contains the following commands:

arp

Description Creates static Address Resolution Protocol (ARP) entries in the ARP table. The **no** command option disables ARP static entries.

Syntax `arp <IPaddress> <MACaddress>`

Parameters

<IPaddress>	Specifies the IP address of the machine.
<MACaddress>	Specifies the Media Access Control (MAC) address.

Example

```
minna (config) # arp 10.0.0.0 00:07:E9:55:10:09
minna (config) #
```

clear arp-cache

Clears dynamic entries in the ARP cache. This does not delete static ARP entries configured with the **arp** command.

Syntax `clear arp-cache`

Parameters None

Example

```
minna (config) # clear arp-cache
minna (config) #
```

show arp

Displays the contents of the ARP cache. This contains all of the statically-configured ARP entries, as well as any that the system has picked up dynamically.

Syntax

```
show arp [static]
```

Parameters

static	Displays static ARP addresses.
--------	--------------------------------

Example

```
minna # show arp
ARP cache contents
IP 10.0.0.15 maps to MAC 00:07:E9:70:20:15
IP 10.0.0.6 maps to MAC 00:05:5D:36:CB:29
IP 10.0.100.1 maps to MAC 00:07:E9:55:10:09
```

Event Logging Configuration and Viewing Commands

This sections describes the logging commands for the HP EFS WAN Accelerator Manager. It contains the following commands:

- ◆ [“logging,” next](#)
- ◆ [“logging” on page 127](#)
- ◆ [“logging console” on page 128](#)
- ◆ [“logging files delete” on page 128](#)
- ◆ [“logging files rotation force” on page 128](#)
- ◆ [“logging local” on page 129](#)
- ◆ [“logging trap” on page 129](#)
- ◆ [“show logging” on page 129](#)
- ◆ [“show log” on page 130](#)

logging

Sends syslog messages to a remote syslog server. The **no** command option removes a remote **syslog** server from the system.

Syntax

```
logging <addr> [trap <log level>]
```

Parameters

<addr>	Specifies the hostname for the syslog server.
trap <log level>	Specifies the trap log level of the syslog server. If you have set different log levels for each remote syslog server, this command changes all remote syslog servers to have a single log level.

Example

```
minna (config) # logging minna
minna (config) #
```

logging console

Set the minimum severity of log messages to be printed to all CLI sessions. The **no** command option removes a remote **syslog** server from the system.

Syntax

logging console

Parameters

None

Example

```
minna (config) # logging console
minna (config) #
```

logging files delete

Description

Deletes a specified number of log files.

Syntax

logging files delete [oldest <number>]

Parameters

oldest <number>	Deletes the oldest log files. Specifies the number of log files to delete. The range is 1 to 10.
------------------------------	--

Example

```
minna (config) # logging files delete oldest 10
minna (config) #
```

logging files rotation force

Description

Rotates logs immediately. This does not affect the schedule of auto-rotation if it was done based on time: the next automatic rotation occurs at the same time it was previously scheduled. If the auto-rotation was based on size, it delays it somewhat as it reduces the size of the active log file to zero.

Syntax

logging files rotation force

Parameters

None

Example

```
minna (config) # logging files rotation force
minna (config) #
```


logging local

Description Sets the minimum severity for messages sent to the local system log (**syslog**) servers. The default value is **none**. The **no** command option sets the severity level for logging to none (no logs are sent).

Syntax `logging local <loglevel>`

Parameters

<loglevel>	Specifies the logging severity level. The following severity levels are supported: <ul style="list-style-type: none"> • emerg Emergency, the system is unusable. • alert Action must be taken immediately. • crit Critical conditions. • err Error conditions. • warning Warning conditions. • notice Normal but significant condition. • info Informational messages. • debug Debug-level messages.
-------------------------	--

Example

```
minna (config) # logging local notice
minna (config) #
```

logging trap

Set the minimum severity of log messages sent to all **syslog** servers. The **no** command option removes a remote **syslog** server from the system.

Syntax `logging trap <log level>`

Parameters

trap <log level>	Specifies the trap log level of the syslog server: alert , crit , debug , emerg , err , info , notice , warning . If you have set different log levels for each remote syslog server, this command changes all remote syslog servers to have a single log level.
-------------------------------	--

Example

```
minna (config) # logging trap alert
minna (config) #
```

show logging

Description Displays log settings.

Syntax `show logging`

Parameters None

Example

```
minna # show logging
Local logging level: info
Default remote logging level: info
No remote syslog receivers configured.
Number of archived log files to keep: 10
Log rotation frequency: daily
minna #
```

show log

Description

Displays system logs.

Syntax

show log [**continuous** | **files** <log number>]

Parameters

continuous	Displays the log continuously, similar to the tail -f command.
files <log number>	Displays a list of log files or a specific log file.

Example

```
minna # show log
Dec 22 20:00:00 localhost /usr/sbin/crond[784]: (root) CMD (/usr/sbin/
logrotate /etc/logrotate.conf)
Dec 22 20:00:00 localhost cli[555]: [cli.INFO]: user admin: CLI got
signal 2 (SIGINT)
Dec 22 20:02:31 localhost cli[555]: [cli.INFO]: user admin: Executing
command: show ip route
Dec 22 20:02:38 localhost cli[555]: [cli.INFO]: user admin: CLI got
signal 2 (SIGINT)
Dec 22 20:03:16 localhost cli[555]: [cli.INFO]: user admin: CLI got
signal 2 (SIGINT)
Dec 22 20:04:00 localhost cli[555]: [cli.INFO]: user admin: Executing
command: show ip route static
Dec 22 20:05:02 localhost cli[555]: [cli.INFO]: user admin: Executing
command: show licenses
Dec 22 20:05:09 localhost cli[555]: [cli.INFO]: user admin: CLI got
signal 2 (SIGINT)
Dec 22 20:06:44 localhost cli[555]: [cli.INFO]: user admin: Executing
command: show limit bandwidth
Dec 22 20:06:49 localhost cli[555]: [cli.INFO]: user admin: CLI got
signal 2 (SIGINT)
Dec 22 20:07:12 localhost cli[555]: [cli.INFO]: user admin: Executing
command: show log
```

User Accounts Commands

This section describes user account commands for the HP EFS WAN Accelerator Manager. It contains the following commands:

- ◆ [“username,” next](#)
- ◆ [“username disable” on page 131](#)
- ◆ [“username nopassword” on page 131](#)
- ◆ [“username password” on page 132](#)

- ◆ [“username password 0” on page 132](#)
- ◆ [“username password 7” on page 132](#)
- ◆ [“username password cleartext” on page 133](#)
- ◆ [“username password encrypted” on page 133](#)
- ◆ [“username privilege” on page 133](#)

There are two accounts: one with full privileges (**admin**), and one with privileges for reading all data and performing all actions, but not for changing any configuration (**monitor**).

username

Description Enables the account so that no one can log in with any password. The **no** command option re-enables the specified user account. To re-enable the account, you must set a password for it.

Syntax `username <userid>`

Parameters

<userid>	Specifies the user login: admin or monitor .
-----------------------	--

Example

```
minna (config) # username monitor
minna (config) #
```

username disable

Description Disables the account so that no one can log in with any password. The **no** command option re-enables the specified user account. To re-enable the account, you must set a password for it.

Syntax `username <userid> disable`

Parameters

<userid>	Specifies the user login: admin or monitor .
-----------------------	--

Example

```
minna (config) # username monitor disable
minna (config) #
```

username nopassword

Description Disables password protection for a user. The **no** command option re-enables the specified user account.

Syntax `username <userid> nopassword`

Parameters

<userid>	Specifies the user login: admin or monitor .
-----------------------	--

Example

```
minna (config) # username monitor nopassword
minna (config) #
```

username password

Description Sets the password for the specified user. The password must be a minimum of 6 characters. The password is returned in cleartext format on the command line.

Syntax **username <userid> password <cleartext>**

Parameters

<userid>	Specifies the user login: admin or monitor .
<cleartext>	Specifies the password. The password must be a minimum of 6 characters.

Example

```
minna (config) # username admin password xyzzzzZ
minna (config) #
```

username password 0

Description Sets the password for the specified user. The password must be a minimum of 6 characters. The password is returned in cleartext format on the command line.

Syntax **username <userid> password 0 <password>**

Parameters

<userid>	Specifies the user login: admin or monitor .
<password>	Specifies the password. The password must be a minimum of 6 characters.

Example

```
minna (config) # username admin password 0 xyzzzzZ
minna (config) #
```

username password 7

Description Sets the password for the specified user. The password must be a minimum of 6 characters. The password is returned in encrypted format on the command line.

Syntax **username <userid> password 7 <password>**

Parameters

<userid>	Specifies the user login: admin or monitor .
<password>	Specifies the password. The password must be a minimum of 6 characters.

Example

```
minna (config) # username admin password 7 xyzzzZ
minna (config) #
```

username password cleartext

Description Sets the password for the specified user. The password must be a minimum of 6 characters. The password is returned in cleartext format on the command line.

Syntax **username <userid> password cleartext <password>**

Parameters

<userid>	Specifies the user login: admin or monitor .
<password>	Specifies the password. The password must be a minimum of 6 characters.

Example

```
minna (config) # username admin password cleartext xyzzzZ
minna (config) #
```

username password encrypted

Description Sets the password for the specified user. The password must be a minimum of 6 characters. The password is returned in encrypted format on the command line.

Syntax **username <userid> password encrypted <password>**

Parameters

<userid>	Specifies the user login: admin or monitor .
<password>	Specifies the password. The password must be a minimum of 6 characters.

Example

```
minna (config) # username admin password encrypted xyzzzZ
minna (config) #
```

username privilege

Description Creates a user account for RADIUS or TACACS+ authentication. The admin and monitor users are not be allowed to be created, modified, or deleted. The **<userid>** parameter is a text string that is a valid username (for example,

monitor or **admin**). A user ID is chosen by the system (for example, starting at 1001+).

Syntax `username <userid> privilege <privilege_level>`

Parameters

<code><userid></code>	Specifies the user login: admin or monitor .
<code><privilege_level></code>	Specifies the maximum level the user can reach. There are two levels: 7 and 15. Level 7 corresponds to enable mode privileges (monitor user) and level 15 corresponds to configuration mode privilege (admin user).

Example

```
minna (config) # username admin privilege 15
minna (config) #
```

Secure Shell Server Commands

This section describes the Secure Shell (**ssh**) server commands for the HP EFS WAN Accelerator Manager. It contains the following commands:

- ◆ [“ssh server enable,”](#) next
- ◆ [“ssh server enable”](#) on page 134
- ◆ [“ssh server host-key generate”](#) on page 134
- ◆ [“show ssh server”](#) on page 135

ssh server enable

Description Enables an **ssh** server. The **no** command option disables the **ssh** server. If the **ssh** server is disabled, the CLI is only accessible over the serial console. Note that this does not terminate existing **ssh** sessions; it will only prevent new ones from being established.

Syntax `ssh server enable`

Parameters None

Example

```
minna (config) # ssh server enable
minna (config) #
```

ssh server host-key generate

Description Regenerate new host keys for the **ssh** server. It generates three keys: RSA for **sshv1**, RSA for **sshv2**, and DSA for **sshv2**. The system automatically generates the host keys on its first boot—run this command only if a security breach is suspected and the keys must be changed.

Syntax	ssh server host-key generate
Parameters	None
Example	minna (config) # ssh server host-key generate minna (config) #

show ssh server

Description	Displays the server settings.
Syntax	show ssh server
Parameters	None
Example	minna # show ssh server SSH server enabled: yes

NTP, Clock, and Time Zone Commands

This section describes the Network Time Protocol (NTP), clock, and time zone commands for the HP EFS WAN Accelerator Manager. It contains the following commands:

- ◆ [“clock set,” next](#)
- ◆ [“clock timezone” on page 136](#)
- ◆ [“ntpdate” on page 136](#)
- ◆ [“ntp disable” on page 136](#)
- ◆ [“ntp enable” on page 137](#)
- ◆ [“ntp peer” on page 137](#)
- ◆ [“ntp server” on page 137](#)
- ◆ [“show clock” on page 138](#)
- ◆ [“show ntp” on page 138](#)

clock set

Description	Sets the system time and date.
Syntax	clock set {<hh:mm:ss> <yyyy/mm/dd>}
Parameters	

<hh:mm:ss>	Specifies the hour, minutes, and seconds.
<yyyy/mm/dd>	Specifies the year, month, and day.

Example

```
minna (config) # clock set 12:34:55
minna (config) #
```

clock timezone

Description Sets the current time zone. The default value is Greenwich Mean Time (GMT-offset).

Syntax clock timezone <zone>

Parameters

<zone>	Specifies the time zone name.
--------	-------------------------------

Usage The possible forms for zone include:

```
<continent> <city>
<continent> <country> <city>
<continent> <region> <country> <city>
<ocean> <island>
```

An offset from GMT. This is in the form:

```
GMT-offset GMT
GMT-offset GMT+<1-12>
GMT-offset GMT-<1-14>
```

Universal Time Code (UTC) is identical to GMT. The default value for GMT is **GMT-offset GMT**.

Example

```
minna (config) # clock timezone GMT
minna (config) #
```

ntpdate

Description Conducts a single time synchronization with a specified Network Time Protocol (NTP) server.

Syntax ntpdate <addr>

Parameters

<addr>	Specifies the NTP server to synchronize with.
--------	---

Example

```
minna (config) # ntpdate 10.10.10.1
minna (config) #
```

ntp disable

Description Disables NTP support. The **no** command option enables NTP support.

Syntax **ntp disable**

Parameters None

Example minna (config) # ntp disable
 minna (config) #

ntp enable

Description Enables NTP support. The **no** command option disables NTP support.

Syntax **ntp enable**

Parameters None

Example minna (config) # ntp enable
 minna (config) #

ntp peer

Description Enables an NTP peer. The **no** command option disables an NTP peer.

Syntax **ntp peer <addr> [version <number>]**

Parameters

<addr>	Specifies the NTP peer IP address.
version <number>	Specifies the NTP version number. You do not need to specify the version number for the no ntp peer command.

Example minna (config) # ntp peer 10.10.10.1
 minna (config) #

ntp server

Description Configures an NTP server. The **no** command option removes an NTP server.

Syntax **ntp server <addr> [version <number>]**

Parameters

<addr>	Specifies the NTP server to synchronize with.
version <number>	Specifies the version number for NTP. You do not need to specify the version number for the no ntp server command.

Example minna (config) # ntp server 10.10.10.1
 minna (config) #

show clock

Description Displays current date and time.

Syntax `show clock`

Parameters None

Example

```
minna # show clock
Time: 19:31:43
Date: 2003/12/22
Zone: GMT-offset GMT
```

show ntp

Description Displays Network Time Protocol (NTP) information.

Syntax `show ntp`

Parameters None

Example

```
minna # show ntp
NTP enabled: yes
No NTP peers configured.
NTP server: 192.6.38.0 (version 4)
NTP server: 66.187.224.1 (version 4)
NTP server: 66.187.233.1 (version 4)
```

Event Notification Commands

This sections describe the email notification commands for the HP EFS WAN Accelerator Manager. This section contains the following commands:

- ◆ [“email enable,” next](#)
- ◆ [“email domain” on page 139](#)
- ◆ [“email mailhub” on page 139](#)
- ◆ [“email notify events enable” on page 139](#)
- ◆ [“email notify events recipient” on page 140](#)
- ◆ [“email notify failures enable” on page 140](#)
- ◆ [“email notify failures recipient” on page 140](#)
- ◆ [“email send-test” on page 141](#)
- ◆ [“show email” on page 141](#)

email enable

Description	Enables email notification of significant alarms and events to HP technical support. The no command option disables email notification.
Syntax	email enable
Parameters	None
Example	<pre>minna (config) # email enable minna (config) #</pre>

email domain

Description	Sets the domain name from which the emails come from. If not set, the first domain name configured using the ip domain-list command is used. The host name does not appear in the return address, only the domain name.
Syntax	email domain <domain>
Parameters	

<domain>	Specifies the domain name for email notification.
-----------------------	---

Example	<pre>minna (config) # email domain <domain> minna (config) #</pre>
----------------	--

email mailhub

Description	Specifies the Simple Mail Transfer Protocol (SMTP) server for email notifications. The no command option disables the SMTP server.
Syntax	email mailhub <hostname or IP address>
Parameters	

<hostname or IP address>	Specifies the SMTP server for email notifications.
---------------------------------------	--

Example	<pre>minna (config) # email mailhub mail-server.example.com minna (config) #</pre>
----------------	--

email notify events enable

Description	Enables email notification for events. The no command option disables email notification.
Syntax	email notify events enable

Parameters None

Example minna (config) # email notify events enable
 minna (config) #

email notify events recipient

Description Enables email notification for events. The **no** command option disables email notification.

Syntax email notify events recipient <email addr>

Parameters

<email addr>	Specifies the email address of users to receive notification of events.
--------------	---

Example minna (config) # email notify events recipient example@example.com
 minna (config) #

email notify failures enable

Description Enables email notification of HP EFS WAN Accelerator failures such as core dumps. The **no** command option disables this command.

Syntax email notify failures

Parameters None

Example minna (config) # email notify failures enable
 minna (config) #

email notify failures recipient

Description Enables email notification of HP EFS WAN Accelerator failures such as core dumps. The **no** command option disables this command.

Syntax email notify failures recipient <email addr>

Parameters

<email-addr>	Specifies the email address of users to receive notification of failures.
--------------	---

Example minna (config) # email notify failures recipient example@example.com
 minna (config) #

email send-test

Description	Sends test email to all configured event and failure recipients.
Syntax	email send-test
Parameters	None
Example	<pre>minna (config) # email send-test minna (config) #</pre>

show email

Description	Displays current email settings.
Syntax	show email
Parameters	None
Example	<pre>minna # show email Mail hub: Domain: domain.com (default) Event emails Enabled: yes No recipients configured. Failure emails Enabled: yes No recipients configured. Autosupport emails Enabled: yes recipient:autosupport@autosupport.domain.com Mail hub:autosupport.domain.com</pre>

Diagnostic Commands

This sections describe the diagnostic commands for the HP EFS WAN Accelerator Manager. These commands are user-mode commands. This section contains the following commands:

- ◆ ["ping,"](#) next
- ◆ ["reload"](#) on page 142
- ◆ ["slogin"](#) on page 143
- ◆ ["tcpdump"](#) on page 143
- ◆ ["telnet"](#) on page 143
- ◆ ["tproxytrace"](#) on page 144
- ◆ ["traceroute"](#) on page 144

ping

Description Executes the **ping** utility, to send ICMP ECHO_REQUEST packets to network hosts for troubleshooting. The **ping** command takes the standard Linux options. For detailed information see the manual (**man**) page.

For example, to check your connections:

```
ping -I <primary-IP-address> <primary-default-gateway>
```

Syntax **ping** [<options>]

Parameters

<options>	The following options are supported: [-L RUBdfnqrvVaA] [-c count] [-i interval] [-w deadline] [-p pattern] [-s packetsize]. [-t ttl] [-I interface or address] For example: ping -I <HP EFS WAN Accelerator-IP-address> <primary-default-gateway> [-M mtu discovery hint] [-S sndbuf] [-T timestamp option] [-Q tos] [hop1...]destination
-----------	--

Example

```
minna # ping minna
PING minna.domain.com (10.0.0.3) 56(84) bytes of data.
64 bytes from minna.domain.com (10.0.0.3): icmp_seq=1 ttl=64 time=0.038 ms
64 bytes from minna.domain.com (10.0.0.3): icmp_seq=2 ttl=64 time=0.024 ms
```

reload

Description Reboots the appliance. If the **clean** option is specified, the data store is cleared before reboot occurs.

Syntax **reload** [clean [halt] | halt | force]

Parameters

clean [halt]	Clears the data store and reboots or shuts down the system. The reload clean halt command clears the data store and shuts down the system.
halt	Shuts down the system.
force	Clears the data store, then reboots or shuts down the system.

Example minna # reload

The session will close. It takes about 2-3 minutes to reboot the appliance.

slogin

Description Enables login to another HP EFS WAN Accelerator using **ssh**. To view options, enter **slogin** at the system prompt.

Syntax slogin [<options>]

Parameters

<options>	To view options, enter slogin at the system prompt.
-----------	--

Example minna # slogin -l usertest

tcpdump

Description Executes the **tcpdump** utility. The **tcpdump** command takes the standard Linux options. For detailed information, see the manual (**man**) page.

TIP: You can write **tcpdump** to a file using the **-w** option so that you can analyze them.

Syntax tcpdump [<options>]

Parameters

[<options>]	The tcpdump command takes the standard Linux options. For detailed information see the manual (man) page.
-------------	---

Example

```
minna # tcpdump
tcpdump: listening on primary
18:59:13.682568 minna.domain.com.ssh > dhcp-22.domain.com.3277: P
3290808290:3290808342(52) ack 3412262693 win 5840 (DF) [dscp 0x10]
18:59:13.692513 minna.domain.com.ssh > dhcp-22.domain.com.3277: P
0:52(52) ack 1 win 5840 (DF) [dscp 0x10]
18:59:13.702482 minna.domain.com.ssh > dhcp-22.domain.com.3277: P
0:52(52) ack 1 win 5840 (DF) [dscp 0x10]
```

telnet

Description Invokes the telnet client. The user is returned to the CLI when telnet finishes. The **telnet** command takes the standard Linux options. For detailed information see the manual (**man**) page.

Syntax telnet [<options>]

Parameters

<options>	The telnet command takes the standard Linux options. For detailed information see the manual (man) page.
------------------------	--

Example

```
minna # telnet
telnet>
```

tproxytrace

Description Describes the HP EFS WAN Accelerator path in real time.

Syntax **tproxytrace** [**<options>**]

Parameters

<options>	The tproxytrace command takes the following options: -h (help) . Print this help text. -i (iface) . Use this interface to send probes on. -d (depth) . Probe to this depth of proxies. -s (source) . Use this source ip address for probes. -t (timeout) . Milliseconds per depth to listen for probe responses.
------------------------	---

Example

```
minna # tproxytrace 10.0.0.3:22
Probe from 10.0.0.3 (primary) to 10.0.0.3:22
depth 1 timed out
```

traceroute

Description Executes the **traceroute** utility. The **traceroute** command takes the standard Linux options. For detailed information see the manual (**man**) page.

Syntax **traceroute** [**<options>**]

Parameters

<options>	The traceroute command takes the standard Linux options. For detailed information see the manual (man) page.
------------------------	--

Example

```
minna # traceroute minna
traceroute to minna.domain.com (10.0.0.3), 30 hops max, 38 byte packets
1 minna (10.0.0.3) 0.035 ms 0.021 ms 0.013 ms
```


Statistics Commands

This section describes the statistics commands for the HP EFS WAN Accelerator Manager. It contains the following commands:

- ◆ [“stats clear-all,”](#) next
- ◆ [“stats sample”](#) on page 145
- ◆ [“stats chd”](#) on page 146
- ◆ [“stats alarm”](#) on page 146
- ◆ [“stats sample”](#) on page 147
- ◆ [“stats settings bandwidth”](#) on page 147
- ◆ [“show stats”](#) on page 147

stats clear-all

Description	Clears all statistics.
Syntax	stats clear-all
Parameters	None
Example	<pre>minna (config) # stats clear-all minna (config) #</pre>

stats sample

Description	Configure sampled statistics.
Syntax	stats sample {<type> clear interval <seconds>}
Parameters	

<type>	Specifies the type of statistic: admission_conn, admission_mem, bypass, cpu_util, duplex_aux, duplex_lan, duplex_pri, duplex_wan, halt_error, memory, mismatch_peer, paging, raid_error, raid_warning, rbt, rbt_kernel, service_error, store-corruption, sw-version.
clear	Clears all statistics for type.
interval <seconds>	Specifies the sampling interval for this set of samples.

Example	<pre>minna (config) # stats bypass clear minna (config) #</pre>
---------	---

stats chd

Description Sets computed historical data points.

Syntax stats chd <CHD ID> clear

Parameters

<CHD ID>	Specifies the specific data point: <CHD ID>, cpu_util , cpu_util_ave , cpu_util_day , duplex_aux , duplex_lan , duplex_pri , duplex_wan , memory_day , paging , paging_day , rbt , rbt_day , rbt_month , rbt_week , rbtkernel , rbtkernel_day , rbtkernel_month , rbtkernel_week .
clear	Clears all data.

Example

```
minna (config) # stats chd rbt_month
minna (config) #
```

stats alarm

Description Configure alarms based on sampled or computed statistics. The **no** command option disables all statistical alarms. The **no stats alarm <type> enable** command disables specific statistical alarms.

Syntax stats alarm {<type> <options>}

Parameters

<type>	Specifies the following types of alarms: bypass (configures all states for alarms), cpu_util_ave , duplex_pri (primary), duplex_aux (auxiliary), duplex_lan (LAN), duplex_wan (WAN), halt_error , mismatch_peer (peer mismatch), paging (memory paging), service_error (HP EFS WAN Accelerator service error), store_corruption (data store corruption), and sw_version (software version mismatch).
<options>	Specifies the following alarm options: <ul style="list-style-type: none">• clear Clears alarm settings.• enable Enables alarm.• rising Sets rising threshold.• rising clear_threshold <amount> Sets the threshold to clear rising alarm.• rising error_threshold <amount> Sets the threshold to trigger rising alarm.

Example

```
minna (config) # stats alarm bypass enable
minna (config) #
```

stats sample

Description Configure sampled statistics.

Syntax `stats sample {<type> clear | interval <seconds>}`

Parameters

<type>	Specifies the type of statistic: <code>admission_conn</code> , <code>admission_mem</code> , <code>bypass</code> , <code>cpu_util</code> , <code>duplex_aux</code> , <code>duplex_lan</code> , <code>duplex_pri</code> , <code>duplex_wan</code> , <code>halt_error</code> , <code>memory</code> , <code>mismatch_peer</code> , <code>paging</code> , <code>raid_error</code> , <code>raid_warning</code> , <code>rbt</code> , <code>rbt_kernel</code> , <code>service_error</code> , <code>store-corruption</code> , <code>sw-version</code> .
clear	Clears all statistics for type.
interval <seconds>	Specifies the sampling interval for this set of samples.

Example

```
minna (config) # stats bypass clear
minna (config) #
```

stats settings bandwidth

Description Configure sampled statistics.

Syntax `stats settings bandwidth <port>`

Parameters

<port>	Specifies the port number to add.
---------------------	-----------------------------------

Example

```
minna (config) # stats settings bandwidth 2727
minna (config) #
```

show stats

Description Displays statistics.

Syntax `show stats {alarm <type>}
[bandwidth all [lan-to-wan | wan-to-lan | bidirectional] [ports [all
<portnumber>] [hour | day | week | month]] |
[cpu] |
[memory] |
[data-reduction [hour | day | week | month]] |
[traffic [hour | day | week | month]]`

Parameters

alarm <type>	Displays alarm statistics. Specify alarm type or <carriage return>: bypass , cpu_util_ave , paging , raid_error , raid_warning , sw-version .
bandwidth all [lan-to-wan wan-to-lan bidirectional] [ports [all <portnumber> [hour day week month]]]	Displays bandwidth statistics.
cpu	Displays CPU statistics.
memory	Displays memory statistics.
data reduction [hour day week month]	Displays throughput statistics for the last hour, day, week, or month.
traffic [hour day week month]	Displays traffic statistics for the last hour, day, week, or month.

Example

```
minna # show stats alarm
Alarm cpu_util_ave      ok
Alarm paging            ok
```

Configuration File Management Commands

The system can store one or more configuration files on persistent storage. At any given time, one of the configuration files is saved to when a save is requested. This section describes the configuration file management commands for the HP EFS WAN Accelerator Manager. This section contains the following commands:

- ◆ [“configuration copy,”](#) next
- ◆ [“configuration delete”](#) on page 149
- ◆ [“configuration fetch”](#) on page 149
- ◆ [“configuration jump-start”](#) on page 150
- ◆ [“configuration merge”](#) on page 150
- ◆ [“configuration move”](#) on page 151
- ◆ [“configuration new”](#) on page 151
- ◆ [“configuration revert saved”](#) on page 152
- ◆ [“configuration switch-to”](#) on page 152
- ◆ [“configuration write”](#) on page 152

configuration copy

Description	Copies a configuration file.
Syntax	configuration copy <sourcename> <new-filename>
Parameters	

<sourcename>	Specifies the source configuration file.
<new-filename>	Specifies the new configuration file.

Example

```
minna (config) # configuration copy westcoast eastcoast
minna (config) #
```

configuration delete

Description	Deletes a configuration file. For an example of usage, see “configuration merge” on page 150 .
Syntax	configuration delete <name>
Parameters	

<name>	Specifies the name of the configuration file.
---------------------	---

Example

```
minna (config) # configuration delete westcoast
minna (config) #
```

configuration fetch

Description	Downloads a configuration file over the network.
Syntax	configuration fetch <URL or scp://username:password@hostname/path/filename>
Parameters	

<URL or scp://username:password@hostname/path/filename>	Specifies the location of the configuration file to download. To copy a configuration file from another HP EFS WAN Accelerator, use the following format: scp://admin:password@other/config/db/configuration-file
--	--

Usage

To copy one configuration file to another HP EFS WAN Accelerator, run the following set of commands:

```
configuration fetch <url-to-remote-config> <new-config-name>
;; this fetches the configuration from the remote appliance
configuration switch-to <new-config-name>
;; this activates the newly fetched configuration
```

Example minna (config) # configuration fetch http://domain.com/westcoast
newconfig
minna (config) #configuration switch-to newconfig

configuration jump-start

Description Reruns the configuration wizard.

Syntax configuration jump-start

Parameters None

Example minna (config) # configuration jump-start
HP EFS WAN Accelerator configuration wizard.

```
Step 1: Hostname? [telegraph]
Step 2: Use DHCP? [no]
Step 3: Primary IP address? [10.0.0.73]
Step 4: Netmask? [255.255.0.0]
Step 5: Default gateway? [10.0.0.1]
Step 6: Primary DNS server? [10.0.0.2]
Step 7: Domain name? [domain.com]
Step 8: Admin password?
Step 9: Copy config from another site? [no]
Step 10: Set the primary interface speed? [auto]
Step 11: Set the primary interface duplex? [auto]
You have entered the following information:
  1. Hostname: telegraph
  2. Use DHCP: no
  3. Primary IP address: 10.0.0.73
  4. Netmask: 255.255.0.0
  5. Default gateway: 10.0.0.1
  6. Primary DNS server: 10.0.0.2
  7. Domain name: domain.com
  8. Admin password: (unchanged)
  9. Copy config from another site: no
 10. Set the primary interface speed: auto
 11. Set the primary interface duplex: auto
To change an answer, enter the step number to return to.
Otherwise hit <enter> to save changes and exit.
Choice:
```

configuration merge

Description Merges common configuration settings from one HP EFS WAN Accelerator to another. Use this command to deploy a network of appliances. Set up a template appliance and merge the template with each appliance in the network.

The following configuration settings are not merged when you run the **configuration merge** command: failover settings, SNMP SysContact and SysLocation, log settings, and all network settings (for example, host name, auxiliary interface, DNS settings, defined hosts, static routing, and in-path routing).

The following configuration settings are not merged when you run the **configuration merge** command: in-path, out-of-path, protocols, statistics, CLI, email, NTP and time, Web, SNMP, and alarm.

Syntax `configuration merge <new-config-name>`

Parameters

<new-config-name>	Specifies the new configuration name.
--------------------------------	---------------------------------------

Usage

To merge a configuration file, run the following set of commands:

```
configuration write to <new-config-name>
    ;; this saves the current config to the new name and activates
    ;; the new configuration
configuration fetch <url-to-remote-config> <temp-config-name>
    ;; this fetches the configuration from the remote appliance
configuration merge <temp-config-name>
    ;; this merges the fetched config into the active configuration
    ;; which is the newly named/created one in step 1 above
configuration delete <temp-config-name>
    ;; this deletes the fetched configuration as it is no longer
    ;; needed since you merged it into the active configuration
```

Example

```
minna (config) # configuration write to newconfig
minna (config) #configuration fetch http://domain.com/remotefconfig
tempconfig
minna (config) #configuration merge tempconfig
minna (config) #configuration delete tempconfig
minna (config) #
```

configuration move

Description Moves and renames a configuration file.

Syntax `configuration move <sourcename> <destname>`

Parameters

<sourcename>	Specifies the name of the source configuration file.
<destname>	Specifies the name of the new configuration file.

Example

```
minna (config) # configuration move westcoast eastcoast
minna (config) #
```

configuration new

Description Creates a new, blank configuration file.

WARNING: HP recommends that you use the **keep licenses** command option. If you do not keep licenses, your new configuration will not have a valid license key.

Syntax `configuration new {<new-filename> [keep licenses]}`

Parameters

<new-filename>	Specifies the name of the new configuration file.
keep licenses	Create a new configuration file with default settings and active licenses.

Example

```
minna (config) # configuration new westcoast
minna (config) #
```

configuration revert saved

Description Reverts active configuration to the last saved configuration.

Syntax `configuration revert saved`

Parameters None

Example

```
minna (config) # configuration revert saved
minna (config) #
```

configuration switch-to

Description Loads a new configuration file and makes it the active configuration. For an example of usage, see [“configuration merge” on page 150](#).

Syntax `configuration switch-to {<filename> | initial | initial.bak}`

Parameters

<filename>	Specifies the name of the configuration file to switch to.
initial	Specifies the initial configuration.
initial.bak	Specifies the initial backup configuration.

Example

```
minna (config) # configuration switch-to westcoast
minna (config) #
```

configuration write

Description Writes the current, active configuration file to memory.

Syntax `configuration write [to <filename>]`

Parameters

to <filename>	Save the running configuration to a file and make it active.
----------------------------	--

Example

```
minna (config) # configuration write
minna (config) #
```

write memory

Description Saves the current configuration settings to memory.

Syntax **write memory**

Parameters None

Example

```
minna (config) # write memory
minna (config) #
```

write terminal

Description Displays commands to recreate current running configuration.

Syntax **write terminal**

Parameters None

Example

```
minna (config) # write terminal
```

write network

Description Saves the current configuration settings to memory.

Syntax **write memory**

Parameters None

Example

```
minna (config) # write network
minna (config) #
```

show configuration

Description Displays the current, saved configuration settings that differ from the default settings.

Syntax **show configuration**

Parameters None

Example

```
minna # show configuration
## Network interface configuration
```

```

no interface primary dhcp
interface primary duplex "auto"
interface primary ip address 10.0.02.05 /16
interface primary mtu "1500"
no interface primary shutdown
interface primary speed "auto"
## Routing configuration
ip default-gateway "10.0.0.1"
## Other IP configuration
hostname "tcfe25"
ip domain-list domain.com
ip name-server 10.0.0.2
## Logging configuration
logging local "info"
## Network management configuration
license install LK1-CMC10BASE-0000-0000-1-XXXX-XXXX-XXX
username admin password XXXXX
## Miscellaneous other settings
internal set modify - /rbt/cmc/config/appliance/dfcfel hostname dfcfel
internal set modify - /rbt/cmc/config/appliance/dfcfel/password string
password
internal set modify - /rbt/cmc/config/appliance/dfcfel/username string
admin
internal set modify - /rbt/cmc/config/appliance/dfsfe1 hostname dfsfe1
internal set modify - /rbt/cmc/config/appliance/dfsfe1/password string
password
internal set modify - /rbt/cmc/config/appliance/dfsfe1/username string
admin
internal set modify - /rbt/cmc/config/general/licensed bool true
internal set modify - /rbt/cmc/config/group/1 uint16 1
internal set modify - /rbt/cmc/config/group/1/name string TestGroup
internal set modify - /rbt/cmc/config/group/2 uint16 2
internal set modify - /rbt/cmc/config/group/2/appliance/dfcfel hostname
dfcfel
internal set modify - /rbt/cmc/config/group/2/appliance/dfsfe1 hostname
dfsfe1
internal set modify - /rbt/cmc/config/group/2/name string Dog
internal set modify - /rbt/cmc/config/group/3 uint16 3
internal set modify - /rbt/cmc/config/group/3/name string GigE
internal set modify - /rbt/cmc/config/poll/interval duration_sec 60
internal set modify - /rbt/cmc/config/poll/processes uint8 1

```

show configuration files

Description	Displays current configuration files.
Syntax	show configuration files [<filename>]
Parameters	
	<filename> Specifies a particular configuration file.
Example	<pre> minna # show configuration files initial (active) initial.bak </pre>

show configuration full

Description	Displays all configuration settings including the default settings.
Syntax	show configuration full
Parameters	None
Example	<pre>minna # show configuration full</pre> displays the full complete configuration.

show configuration running

Description	Displays running configuration settings. The show configuration running full command displays all settings including default settings.
Syntax	show configuration running [full]
Parameters	

full	Displays complete running configuration settings.
-------------	---

Example	<pre>minna # show configuration running</pre>
----------------	---

License Key Commands

The following section describes license key commands for the HP EFS WAN Accelerator Manager. It contains the following commands:

- ◆ [“license delete,”](#) next
- ◆ [“license install”](#) on page 156
- ◆ [“show licenses”](#) on page 156

license delete

Description	Deletes the specified license key.
Syntax	license delete <number>
Parameters	

<number>	Specifies the license key to delete.
-----------------------	--------------------------------------

Example	<pre>minna (config) # license delete SH10_B-0000-1-7F14-FC1F</pre> <pre>minna (config) #</pre>
----------------	--

license install

Description Installs a new software license key.

Syntax `license install <license key>`

Parameters

<code><license key></code>	Specifies the license key.
----------------------------------	----------------------------

Example

```
minna (config) # license install SH10_B-0000-1-7F14-FC1F
minna (config) #
```

show licenses

Description Displays active licenses.

Syntax `show licenses`

Parameters None

Example

```
minna # show licenses
XXX-XXXXXX-XXXX-XXXX-X-XXXX-XXXX-XXXX
Feature:      SH10BASE
Valid:        yes
Active:       yes
Start date:
```

Image Management Commands

This section describes the software image management commands for the HP EFS WAN Accelerator Manager. It contains the following commands:

- ◆ [“image boot,” next](#)
- ◆ [“image delete” on page 157](#)
- ◆ [“image fetch” on page 157](#)
- ◆ [“image install” on page 157](#)
- ◆ [“image move” on page 158](#)
- ◆ [“show bootvar” on page 158](#)
- ◆ [“show images” on page 158](#)

image boot

Description Boots the specified system image by default.

Syntax `image boot <partition>`

Parameters

<partition>	Specifies the partition to boot: 1 or 2.
--------------------------	--

Example

```
minna (config) # image boot 1
minna (config) #
```

image delete

Description Deletes the specified software image.

Syntax **image delete <image-filename>**

Parameters

<image-filename>	Specifies the software image to delete.
-------------------------------	---

Example

```
minna (config) # image delete snkv1.0
minna (config) #
```

image fetch

Description Downloads a software image from a remote host.

Syntax **image fetch <URL or scp://username:password@hostname/path/filename>
<image-filename>**

Parameters

<URL or scp:// username:password@hostname/ path/filename>	Specifies the location of the software image. A carriage return downloads the image and gives it the same name it had on the server.
<image-filename>	Specifies the filename under which to store the image locally.

Example

```
minna (config) # image fetch http://www.domain.com/v.1.0 version1.0
minna (config) #
```

image install

Description Installs the software image onto a system partition.

Syntax **image install <image-filename> <partition>**

Parameters

<image-filename>	Specifies the software image filename.
<partition>	Specifies the partition number: 1, 2 .

Example

```
minna (config) # image install version1.0 2
minna (config) #
```

image move

Description

Moves or renames an inactive system image on the hard disk.

Syntax

image move <source-image-name> <new-image-name>

Parameters

<source-image-name>	Specifies the name of the software image to move or rename.
<new-image-name>	Specifies the new name of the software image.

Example

```
minna (config) # image move www.domain.com/v.1.0 version1.0
minna (config) #
```

show bootvar

Description

Displays the software image that is booted upon the next reboot.

Syntax

show bootvar

Parameters

None

Example

```
minna # show bootvar
Installed images:
Partition 1:
rbtcmccmc/linux Siberia #3 2004-07-07 15:18:06 root@el:CVS_TMS/HEAD
Partition 2:
rbtcmccmc/linux Siberia #4 2004-07-09 18:29:04 root@el:CVS_TMS/HEAD
Last boot partition: 2
Next boot partition: 2
```

show images

Description

Displays the available software images.

Syntax

show images

Parameters

None

Example

```
minna # show images
Installed images:
Partition 1:
```

```
rbtcmccmc/linux Siberia #3 2004-07-07 15:18:06 root@el:CVS_TMS/HEAD
Partition 2:
rbtcmccmc/linux Siberia #4 2004-07-09 18:29:04 root@el:CVS_TMS/HEAD
Last boot partition: 2
Next boot partition: 2
tcfe25 (config) #
tcfe25 (config) # show images
Images available to be installed:
webimage.tbz
rbtcmccmc/linux Siberia #4 2004-07-09 18:29:04 root@el:CVS_TMS/HEAD
Installed images:
Partition 1:
rbtcmccmc/linux Siberia #3 2004-07-07 15:18:06 root@el:CVS_TMS/HEAD
Partition 2:
rbtcmccmc/linux Siberia #4 2004-07-09 18:29:04 root@el:CVS_TMS/HEAD
Last boot partition: 2
Next boot partition: 2
```

show web

Description	Displays current Web settings.
Syntax	show web
Parameters	None
Example	<pre>minna # show web web-based management console enabled: HTTP enabled: yes HTTP port: 80 HTTPS enabled: yes HTTPS port: 443 Inactivity timeout: 15 minutes Session timeout: 60 minutes Session renewal threshold: 30 minutes</pre>

CLI Option Commands

This section describe the CLI commands for the HP EFS WAN Accelerator Manager. It contains the following commands:

- ◆ [“cli clear-history,”](#) next
- ◆ [“cli default paging enable”](#) on page 160
- ◆ [“cli session”](#) on page 160
- ◆ [“show cli”](#) on page 160
- ◆ [“show terminal”](#) on page 161

cli clear-history

Description	Clears the command history for the current user.
--------------------	--

Syntax `cli clear-history`

Parameters None

Example

```
minna (config) # cli clear-history
minna (config) #
```

cli default paging enable

Description Sets paging so that it is enabled each time you login. With paging enabled, if there is too much text to fit on the page, the CLI prompts you for the next page of text. The **no** command option disables paging.

Syntax `cli default paging enable`

Parameters None

Example

```
minna (config) # cli default paging enable
minna (config) #
```

cli session

Description Sets cli options for current session only.

Syntax `cli session {auto-logout <minutes> | paging enable | terminal length <lines> | type <terminal_type> | width <characters>}`

Parameters

auto-logout <minutes>	Sets the number of minutes before the CLI automatically logs out the user. The default value is 15 minutes. The no command option disables the automatic logout feature.
paging enable	With paging enabled, if there is too much text to fit on the page, the CLI prompts you for the next page of text. The no command option disables paging.
terminal length <lines>	Sets the terminal length. The no command option disables the terminal settings.
type <terminal_type>	Sets the terminal type. The no command option disables the terminal settings.
width <terminal_width>	Sets the terminal width. The no command option disables the terminal settings.

Example

```
minna (config) # cli session auto-logout 20
minna (config) #
```

show cli

Description Displays current CLI settings.

Syntax **show cli**

Parameters None

Example

```
minna # show cli
CLI current session settings
Terminal width: 119 columns
Terminal length: 31 rows
Terminal type: xterm
Auto-logout: 15 minutes
Paging: enabled
CLI defaults for future sessions
Auto-logout: 15 minutes
Paging: enabled
```

show terminal

Description Displays terminal settings.

Syntax **show terminal**

Parameters None

Example

```
minna # show terminal
Terminal width: 80 columns
Terminal length: 24 rows
Terminal type: xterm
```

Enable Configuration Mode and Persistence Commands

This section describes configuration mode and persistence commands for the HP EFS WAN Accelerator Manager. It contains the following commands:

- ◆ [“configure terminal,”](#) next
- ◆ [“disable”](#) on page 162
- ◆ [“enable”](#) on page 162
- ◆ [“exit”](#) on page 162

configure terminal

Description Enables configuration from the terminal by entering the configuration subsystem. To exit the configuration subsystem, type **exit**. The **no configure-**command option disables the option.

Syntax **configure terminal**

Parameters None

Example minna # configure terminal
minna (config) #

disable

Description Exits privileged-mode.

Syntax disable

Parameters None

Example minna # disable
minna >

enable

Description Enters privileged-mode.

Syntax enable

Parameters None

Example minna > enable
minna #

exit

Description Exits the CLI when in non-privileged-mode; exits privileged mode when in privileged mode; exits configuration-mode when in configuration mode.

Syntax exit

Parameters None

Example minna (config) # exit
minna #

SNMP Commands

This section describes the Simple Network Mail Protocol (SNMP) commands. It contains the following commands:

- ◆ [“show snmp,” next](#)
- ◆ [“snmp-server community” on page 163](#)
- ◆ [“snmp-server contact” on page 163](#)
- ◆ [“snmp-server enable” on page 164](#)
- ◆ [“snmp-server host” on page 164](#)

◆ [“snmp-server location” on page 164](#)

show snmp

Description	Displays current Simple Network Management Protocol (SNMP) server settings.
Syntax	<code>show snmp</code>
Parameters	None
Example	<pre>minna # show snmp SNMP enabled: yes System location: System contact: Read-only community: public Traps enabled: yes No trap sinks configured.</pre>

snmp-server community

Description	Enables an SNMP server community. The no command option disables an SNMP server community.		
Syntax	<code>snmp-server community <name></code>		
Parameters			
	<hr/> <table> <tr> <td><name></td><td>Specifies the name of the SNMP server community.</td></tr> </table> <hr/>	<name>	Specifies the name of the SNMP server community.
<name>	Specifies the name of the SNMP server community.		

Example	<pre>minna (config) # snmp-server community ReaDonLy minna (config) #</pre>
---------	---

snmp-server contact

Description	Sets the SNMP server contact. The no command option disables the SNMP server contact.		
Syntax	<code>snmp-server contact <name></code>		
Parameters			
	<hr/> <table> <tr> <td><name></td><td>Specifies the name of the SNMP server community contact.</td></tr> </table> <hr/>	<name>	Specifies the name of the SNMP server community contact.
<name>	Specifies the name of the SNMP server community contact.		

Example	<pre>minna (config) # snmp-server contact john doe minna (config) #</pre>
---------	---

snmp-server enable

Description Enables an SNMP server. The **no** command option disables the SNMP server or traps.

Syntax **snmp-server enable [traps]**

Parameters

traps	Enables SNMP traps.
--------------	---------------------

Example

```
minna (config) # snmp-server enable
minna (config) #
```

snmp-server host

Description Sets the SNMP server host, traps, and version. The **no** command option disables the SNMP server host.

Syntax **snmp-server {host <hostname or IP address> traps <communitystring> traps version <versionnumber> <communityname>}**

host <hostname or IP address>	Specifies the host name or IP address for the SNMP server.
--	--

traps <communitystring>	Sets the SNMP trap on a community.
--------------------------------------	------------------------------------

traps version <versionnumber> <communityname>	Specifies the SNMP trap version number and community name.
--	--

Example

```
minna (config) # snmp-server host minna
minna (config) #
```

snmp-server location

Description Sets the SNMP server location. The **no** command option disables the SNMP server location.

Syntax **snmp-server location <addr>**

Parameters

<addr>	Specifies the location of the system.
---------------------	---------------------------------------

Example

```
minna (config) # snmp-server location 10.10.10.1
minna (config) #
```

Web Commands

This section describes the Web commands for the HP EFS WAN Accelerator Manager. It contains the following commands:

- ◆ [“show web,”](#) next
- ◆ [“web auto-logout”](#) on page 165
- ◆ [“web enable”](#) on page 166
- ◆ [“web http enable”](#) on page 166
- ◆ [“web http port”](#) on page 166
- ◆ [“web https enable”](#) on page 166
- ◆ [“web https port”](#) on page 167
- ◆ [“web session renewal”](#) on page 167
- ◆ [“web session renewal”](#) on page 167

show web

Description	Displays current Web settings.
Syntax	show web
Parameters	None
Example	<pre>minna # show web web-based management console enabled: HTTP enabled: yes HTTP port: 80 HTTPS enabled: yes HTTPS port: 443 Inactivity timeout: 15 minutes Session timeout: 60 minutes Session renewal threshold: 30 minutes</pre>

web auto-logout

Description	Sets the number of minutes before the HP EFS WAN Accelerator Management Console automatically logs out the user. The default value is 15 minutes. The no command option disables the automatic log out feature.
Syntax	web auto-logout <minutes>
Parameters	

<minutes>	Specifies the number of minutes before the system automatically logs out the user.
-----------	--

Example	<pre>minna (config) # web auto-logout 20 minna (config) #</pre>
---------	---

web enable

Description	Enables the HP EFS WAN Accelerator Management Console. The default value is true . The no command option disables the HP EFS WAN Accelerator Management Console.
Syntax	web enable
Parameters	None
Example	<pre>minna (config) # web enable minna (config) #</pre>

web http enable

Description	Enables the HyperText Transfer Protocol (HTTP). The default value is true . The no command option disables the HP EFS WAN Accelerator Management Console.
Syntax	web http enable
Parameters	None
Example	<pre>minna (config) # web http enable minna (config) #</pre>

web http port

Description	Sets the Web port. The default value is 80 . The no command option resets the Web port to the default value.
Syntax	web http port <port>
Parameters	

<port>	Specifies the port number.
---------------------	----------------------------

Example	<pre>minna (config) # web http port 8080 minna (config) #</pre>
----------------	---

web https enable

Description	Sets the secure Web. The no command option disables secure port support.
Syntax	web https enable
Parameters	None
Example	<pre>minna (config) # web https enable minna (config) #</pre>

web https port

Description Sets the secure Web port. The **no** command option disables support on a secure port.

Syntax `web https port <port>`

Parameters

<port>	Specifies the port number.
---------------------	----------------------------

Example

```
minna (config) # web https port 8080
minna (config) #
```

web session renewal

Description Sets the session renewal time. The time duration before the Web session timeout at which if a Web request comes in (that is, user activity), the Web session is automatically renewed. The default value is **10** minutes. The **no** command option resets the session renewal time to the default value.

Syntax `web https renewal <minutes>`

Parameters

<minutes>	Specifies the number of minutes.
------------------------	----------------------------------

Example

```
minna (config) # web session renewal 5
minna (config) #
```

web session timeout

Description Sets the session timeout value. This is the amount of time the cookie is active. The default value is **60** minutes. The **no** command option resets the session timeout to the default value.

Syntax `web session timeout <minutes>`

Parameters

<minutes>	Specifies the number of minutes.
------------------------	----------------------------------

Example

```
minna (config) # web session timeout 120
minna (config) #
```

TCP Dump Capture Commands

This section describes **tcpdump** commands for the HP EFS WAN Accelerator Manager. It contains the following commands:

- ◆ [“file tcpdump,”](#) next
- ◆ [“show files tcpdump”](#) on page 168

file tcpdump

Description Deletes or uploads a **tcpdump** file.

Syntax `file tcpdump {delete <filename> | upload <filename> <URL or scp://username:password@hostname/path/filename>}`

Parameters

<code>delete <filename></code>	Deletes the tcpdump file.
<code>upload <filename> <URL></code>	Uploads a tcpdump output file to a remote host. Takes a URL or: <code>scp://username:password@hostname/path/filename</code> .

Example

```
minna (config) # file tcpdump delete dumpfile
minna (config) #
```

show files tcpdump

Description Displays files saved by the **tcpdump** utility.

Syntax `show files tcpdump`

Parameters None

Example

```
minna # show files tcpdump
minna #qtest
```


APPENDIX B

HP System Ports

In This Appendix

This appendix describes the HP system default, secure, and interactive ports. It contains the following sections:

- ◆ [“Default Ports,”](#) next
- ◆ [“Commonly Optimized Ports”](#) on page 169
- ◆ [“Interactive Ports Automatically Forwarded by the HP System”](#) on page 170
- ◆ [“Secure Ports Automatically Forwarded by the HP System”](#) on page 170

Default Ports

The HP system uses the following default ports.

- ◆ In-path Listening Port: 7800
- ◆ Out-of-Path Server Port: 7810
- ◆ Failover Port: 7820
- ◆ Exchange Port: 7830

Commonly Optimized Ports

The HP EFS WAN Accelerator by default optimizes all ports. If you do not want the HP EFS WAN Accelerator to optimize all ports for an in-path or out-of-path configuration, you can specify specific ports for optimization.

Although these ports can vary according to your requirements, the following ports are commonly specified for in-path and out-of-path configurations:

- ◆ 80
- ◆ 135
- ◆ 139

- ◆ 445
- ◆ 7830

Interactive Ports Automatically Forwarded by the HP System

The following interactive ports are automatically forwarded by the HP system.

Port	Description
7	TCP ECHO
23	Telnet
37	UDP/Time
107	Remote Telnet Service
513	Remote Login
514	Shell
3389	MS WBT Server, TS/Remote Desktop
5631	PC Anywhere
5900-5903	VNC
6000	X11

For detailed information about how to set interactive port forwarding, see [“Setting In-Path Rules for Appliance Groups” on page 91](#).

Secure Ports Automatically Forwarded by the HP System

The following table contains the secure ports that are automatically forwarded by the HP system.

Type	Port	Description
ssh	22/tcp	SSH Remote Login Protocol
https	443/tcp	http protocol over TLS/SSL
smtps	465/tcp	# SMTP over SSL (TLS)
nntps	563/tcp	nntp protocol over TLS/SSL (was snntp)
imap4-ssl	585/tcp	IMAP4+SSL (use 993 instead)
sshell	614/tcp	SSLshell
ldaps	636/tcp	ldap protocol over TLS/SSL (was sldap)

Type	Port	Description
ftps-data	989/tcp	ftp protocol, data, over TLS/SSL
ftps	990/tcp	ftp protocol, control, over TLS/SSL
telnets	992/tcp	telnet protocol over TLS/SSL
imaps	993/tcp	imap4 protocol over TLS/SSL
pop3s	995/tcp	pop3 protocol over TLS/SSL (was spop3)
l2tp	1701/tcp	l2tp
pptp	1723/tcp	pptp
tftps	3713/tcp	TFTP over TLS

The following table contains the uncommon ports automatically forwarded by the HP system.

Type	Port	Description
nsiiops	261/tcp	IIOP Name Service over TLS/SSL
ddm-ssl	448/tcp	DDM-Remote DB Access Using Secure Sockets
corba-iiop-ssl	684/tcp	CORBA IIOP SSL
ieee-mms-ssl	695/tcp	IEEE-MMS-SSL
ircs	994/tcp	irc protocol over TLS/SSL
njenet-ssl	2252/tcp	NJENET using SSL
ssm-cssps	2478/tcp	SecurSight Authentication Server (SSL)
ssm-els	2479/tcp	SecurSight Event Logging Server (SSL)
giop-ssl	2482/tcp	Oracle GIOP SSL
ttc-ssl	2484/tcp	Oracle TTC SSL
syncserverssl	2679/tcp	Sync Server SSL
dicom-tls	2762/tcp	DICOM TLS
realsecure	2998/tcp	Real Secure
orbix-loc-ssl	3077/tcp	Orbix 2000 Locator SSL
orbix-cfg-ssl	3078/tcp	Orbix 2000 Locator SSL
cops-tls	3183/tcp	COPS/TLS
csvr-sslproxy	3191/tcp	ConServR SSL Proxy
xnm-ssl	3220/tcp	XML NM over SSL
msft-gc-ssl	3269/tcp	Microsoft Global Catalog with LDAP/SSL
networklenss	3410/tcp	NetworkLens SSL Event
xtrms	3424/tcp	xTrade over TLS/SSL
jt400-ssl	3471/tcp	jt400-ssl
seclayer-tls	3496/tcp	securitylayer over tls

Type	Port	Description
vt-ssl	3509/tcp	Virtual Token SSL Port
jboss-iiop-ssl	3529/tcp	JBoss IIOP/SSL
ibm-diradm-ssl	3539/tcp	IBM Directory Server SSL
can-nds-ssl	3660/tcp	Candle Directory Services using SSL
can-ferret-ssl	3661/tcp	Candle Directory Services using SSL
linktest-s	3747/tcp	LXPRO.COM LinkTest SSL
asap-tcp-tls	3864/tcp	asap/tls tcp port
topflow-ssl	3885/tcp	TopFlow SSL
sdo-tls	3896/tcp	Simple Distributed Objects over TLS
sdo-ssh	3897/tcp	Simple Distributed Objects over SSH
iss-mgmt-ssl	3995/tcp	ISS Management Svcs SSL
suucp	4031/tcp	UUCP over SSL
wsm-server-ssl	5007/tcp	wsm server ssl
sip-tls	5061/tcp	SIP-TLS
imqtunnels	7674/tcp	iMQ SSL tunnel
davsrsrcs	9802/tcp	WebDAV Source TLS/SSL
intrepid-ssl	11751/tcp	Intrepid SSL
rets-ssl	12109/tcp	RETS over SSL

For detailed information about how to set secure port forwarding, see [“Setting In-Path Rules for Appliance Groups” on page 91](#).

APPENDIX C

Technical Specifications and Regulatory Information

In This Appendix

This appendix summarizes the technical specifications and regulatory information for the HP EFS WAN Accelerator. This appendix includes the following sections:

- ◆ [“HP EFS WAN Accelerator Manager Technical Specifications,”](#) next
- ◆ [“Environmental Specifications”](#) on page 174

HP EFS WAN Accelerator Manager Technical Specifications

The following table summarizes the physical and power specifications for the HP EFS WAN Accelerator.

HP EFS WAN Accelerator	
Number of Units (U)	1 U
Dimensions	1.70 x 16.78 x 24 in (4.32 x 42.62 x 60.96 cm)
Weight	27.5 to 37 lbs 12.47 to 16.78 kg
Voltage and Frequency	100-240V Voltage 50-60 Hz Frequency 6.0 A (110 V) to 3.0 A (220 V)
Power Supply	Single, 350 W, power supply unit

Environmental Specifications

The following table summarizes the environmental requirements for the HP EFS WAN Accelerator.

All Models	
Temperature (Operating)	10° C - 35° C 50° F - 95° F
Temperature (Storage)	-40° C - 70° C -40° F to 158° F
Relative Humidity	19 - 90% non-condensing

Glossary

ARP. Address Resolution Protocol. An IP protocol used to obtain a node's physical address.

Bandwidth. The upper limit on the amount of data, typically in kilobits per second (kbps), that can pass through a network connection. Greater bandwidth indicates faster data transfer capability.

Bit. A Binary digit. The smallest unit of information handled by a computer; either 1 or 0 in the binary number system.

Blade. One component in a system that is designed to accept some number of components (blades).

CIFS. Common Internet File System. CIFS is the remote file system access protocol used by Windows servers and clients to share files across the network.

Default gateway. The default address of a network or Web site. It provides a single domain name and point of entry to the network or site.

DHCP. Dynamic Host Configuration Protocol. Software that automatically assigns IP addresses to client stations logging onto a TCP/IP network.

Domain. In the Internet, a portion of the Domain Name Service (DNS) that refers to groupings of networks based on the type of organization or geography.

DNS. Domain Name Service. System used in the Internet for translating names of network nodes into IP addresses. A Domain Name Server notifies hosts of other host IP addresses, associating host names with IP addresses.

Ethernet. The most widely used Local Area Network (LAN) access method.

Gateway. A computer that acts as an intermediate device with two or more networks that use the same protocols. The gateway functions as an entry and exit point to the network. Transport protocol conversion might not be required, but some form of processing is typically performed.

Gigabit Ethernet. An Ethernet technology that raises transmission speed to 1 Gbps (1000 Mbps).

Host. A computer or other computing device that resides on a network.

Host address. The IP address assigned to each computer attached to the network.

Host name. Name given to a computer, usually by DNS.

HTTP. HyperText Transport Protocol. The protocol used by Web browsers to communicate with Web servers.

Interface. The point at which a connection is made between two elements, systems, or devices so that they can communicate with one another.

Internet. The collection of networks tied together to provide a global network that use the TCP/IP suite of protocols.

IP. Internet protocol. Network layer protocol in the TCP/IP stack that enables a connectionless internetwork service.

IP address. In IP version 4 (IPv4), a 32-bit address assigned to hosts using the IP protocol. Also called an Internet address.

Latency. Delay between a request being issued and its response being received.

Layer 4. A communications protocol (called the transport layer) responsible for establishing a connection and ensuring that all data has arrived safely. The application delivers its data to the communications system by passing a stream of data bytes to the transport layer along with the socket (the IP address of the station and a port number) of the destination machine.

MAPI. Messaging API. A programming interface from Microsoft that enables a client application to send and receive mail from Exchange Server or a Microsoft Mail (MS Mail) messaging system. Microsoft applications such as Outlook, the Exchange client, and Microsoft Schedule use MAPI.

Microsoft Exchange. Messaging and groupware software for Windows from Microsoft. The Exchange server is an Internet-compliant messaging system that runs under Windows systems and can be accessed by Web browsers, the Windows Inbox, Exchange client or Outlook. The Exchange server is also a storage system that can hold anything that needs to be shared.

Netmask. A 32-bit mask which shows how an Internet address is divided into network, subnet, and host parts. The netmask has ones in the bit positions in the 32-bit address which are used for the network and subnet parts, and zeros for the host part. The mask must contain at least the standard network portion (as determined by the class of the address), and the subnet field should be contiguous with the network portion.

NFS. Network File System. The file sharing protocol in a UNIX network.

NIS. Network Information Services. A naming service from that allows resources to be easily added, deleted or relocated.

Packet. A unit of information transmitted, as a whole, from one device to another on a network.

Probe. A small utility program that is used to investigate, or test, the status of a system, network or Web site.

Policy. Routing and Quality of Service (QoS) scheme that forwards data packets to network interfaces based on user-configured parameters.

Port. A pathway into and out of the computer or a network device such as a hub, switch, or router. On network devices, the ports are for communications, typically connecting Ethernet cables or other network devices.

Router. A device that forwards data packets from one LAN or WAN to another. Based on routing tables and routing protocols, routers read the network address in each transmitted frame and make a decision on how to send it based on the most expedient route (traffic load, line costs, speed, bad lines, etc.). Routers work at Layer 3 in the protocol stack, whereas bridges and switches work at the Layer 2.

SNMP. Simple Network Management Protocol. A network protocol that provides a way to monitor network devices, performance, and security and to manage configurations and collect statistics.

Switch. A network device that filters and forwards frames based on the destination address of each frame. The switch operates at Layer 2 (data link layer) of the Open System Interconnection (OSI) model.

TCP. Transmission Control Protocol. The error correcting Transport layer (Layer 4) in the TCP/IP protocol suite.

TCP/IP. Transmission Control Protocol/Internet Protocol. The protocol suite used in the Internet, intranets, and extranets. TCP provides transport functions, which ensures that the total amount of bytes sent is received correctly at the other end. TCP/IP is a routable protocol, and the IP part of TCP/IP provides this capability.

Index

A

- Additional resources 11
- Administrative password 58
- Administrative password, setting 58
- Alarm thresholds, setting 45
- Alarm thresholds, setting for appliance groups 98
- Appliance groups, backup configurations 17
- Appliance Setup menu 34
- Appliance, appliance groups, overview 16
- Appliance, restarting 80
- Appliance, WCCP overview 83
- Appliances, registering 16
- Arp 126
- Auto-discovery rules, enabling for appliance groups 92
- Auto-discovery rules, overview of 91

B

- Backup configurations for appliance groups 17
- Batch commands, CLI overview 19
- Buddy address, setting 89

C

- Clear arp-cache 126
- CLI
 - command negation 120
 - connecting 118
 - online help 119
 - overview 18, 118
 - overview of batch configuration 19
 - saving configurations 120
 - send commands to appliance groups 110
 - sending batch commands 110
 - viewing 114
- CLI clear-history 159
- CLI default paging enable 160
- CLI session 160
- Client connections, resetting with start up 83
- clock set 135
- Clock timezone 136
- Configuration
 - activating 75

- copy 149

- delete 149

- fetch 149

- jump-start 150

- merge 150

- move 151

- new 151

- revert saved 152

- switch-to 152

- write 152

- writing to memory 74

- Configuration backups for appliance groups,
 - overview 17

- Configure terminal 161

- Connecting 29

- Connecting the power 25

- Connecting to your network 29

- Connections, verifying 29

D

- Date and time, setting 53

- Default ports 169

- Disable 162

- DNS, setting 40

E

- Email

- enable 139

- mailhub 139

- notify events enable 139

- notify events recipient 140

- notify failures enable 140

- notify failures recipient 140

- send-test 139, 141

- Enable 162

- Enabling Layer 4 switch support 82

F

- Failover port 168

- Failover support for appliance groups,
 - enabling 89

- Fault email notification 46

- Fault reporting, setting 46
- Fault reporting, setting for appliance groups 99
- File tcpdump 168
- Fixed target rules, enabling on appliance groups 93
- Fixed target rules, overview of 91

G

- Getting help 12

H

- Hardware and software dependencies 11
- Help
 - technical support 12
- Help menu 34
- Home menu 34
- Hostname 123
- Hosts, specifying 42
- HP
 - storage web site 13

I

- Image
 - boot 156
 - delete 157
 - fetch 157
 - install 157
 - move 158
- In-path rules, setting for appliance groups 91
- Interactive ports, forwarded 170
- Interface 121
 - dhcp 122
 - duplex 121
 - shutdown 122
 - speed 121
- IP
 - default-gateway 125
 - domain-list 124
 - host 124
 - name-server 123
 - route 125

K

- Kickoff, enabling 83

L

- Layer 4 switch support, enabling 82
- Layer 4 Switch support, overview of 82
- License
 - delete 155
 - install 156
- License, updating 78

- Local logging, setting 50
- Local logging, setting for appliance groups 103
- Local Setup menu 34
- Logging 127
 - console 128
 - files delete 128
 - files rotation force 128
 - local 129
 - menu 34
 - trap 129

M

- Monitor password, setting 60
- Mounting to a rack 23

N

- Navigating 33
- Network

- connecting 29

NTP

- disable 136
 - enable 137
 - peer 137
 - server 137

- NTP servers, setting 55

- ntpdate 136

O

- Online documentation 11
- Online help contents, viewing 115
- Out-of-path support, enabling on appliance groups 85

P

- Pass through rules, enabling on appliance groups 95
- Pass-through rules, overview of 91
- PBR, overview of 83
- Ping 142
- Polling interval, overview 17
- Ports, commonly optimized 169
- Power
 - connecting 25
- Preparing your site 22
- Product inventory 21

R

- Rebooting, appliance groups 109
- Registering appliance 16
- Related reading 12
- Release notes for this guide, locating 11
- Reload 142
- Remote logging, setting 52
- Remote logging, setting for appliance groups 105
- Reports menu 34

Required configuration information 22
Restarting appliance 80

S

Secret1, Secret 2, appliance authentication 87
Secure ports, forwarded 170
Service settings, configuring appliance groups 81
Service, restarting appliance groups 108
Setting alarm thresholds 45
Setting date and time 53
show arp 127
show bootvar 158
show cli 160
show clock 138
show configuration 153
show configuration files 154
show configuration full 155
show configuration running 155
show email 141
show files tcpdump 168
show hosts 124
show images 158
show interface 122
show ip 126
show licenses 156
show log 130
show logging 129
show ntp 138
show terminal 161
show web 159
Shutting down 80
SNMP traps, setting 48
SNMP traps, setting for appliance groups 101
snmp-server community 163
snmp-server contact 163
snmp-server enable 164
snmp-server host 164
snmp-server location 164
Software, upgrading for appliance groups 106
Specifying hosts 42
ssh server enable 134
ssh server host-key generate 134
stats alarm 146
stats chd 146
stats clear-all 145
stats sample 145, 147
stats settings bandwidth 147
Support 12

T

tcpdump 143
Technical support 12
Technical support, contacting 114
telnet 143

Tools and equipment, required 22
tproxytrace 144
traceroute 144

U

username 131
username disable 131
username nopassword 131
username password 132
username password 0 132
username password 7 132
username password cleartext 133
username password encrypted 133
username privilege 133
Users, types of 9

V

verifying connections 29
Viewing group status reports 112

W

WCCP, overview of 83
web auto-logout 165
web enable 166
web http enable 166
web http port 166
web https enable 166
web https port 167
web session renewal 167
web session timeout 167
Welcome page 32
write memory 153
write network 153
write terminal 153
Writing to memory configuration 74

